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MC REPORT 011
Volume 13

**ACOUSTIC ENVIRONMENTAL SCENARIOS
AND
PREDICTIONS FOR ASW**

**VOLUME 13
AREA 4B, SUMMER
PREDICTIONS FOR PASSIVE SONAR**

October 1972

LONG RANGE ACOUSTIC PROPAGATION PROJECT

AS 916610L



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Director, Long Range Acoustic Propagation Project (ONR Code 102-OS).

ADDITION for

NYIS

WFO Section ☐

Bull Section ☐

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JUSTIFICATION

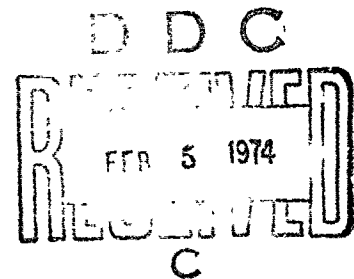
BY

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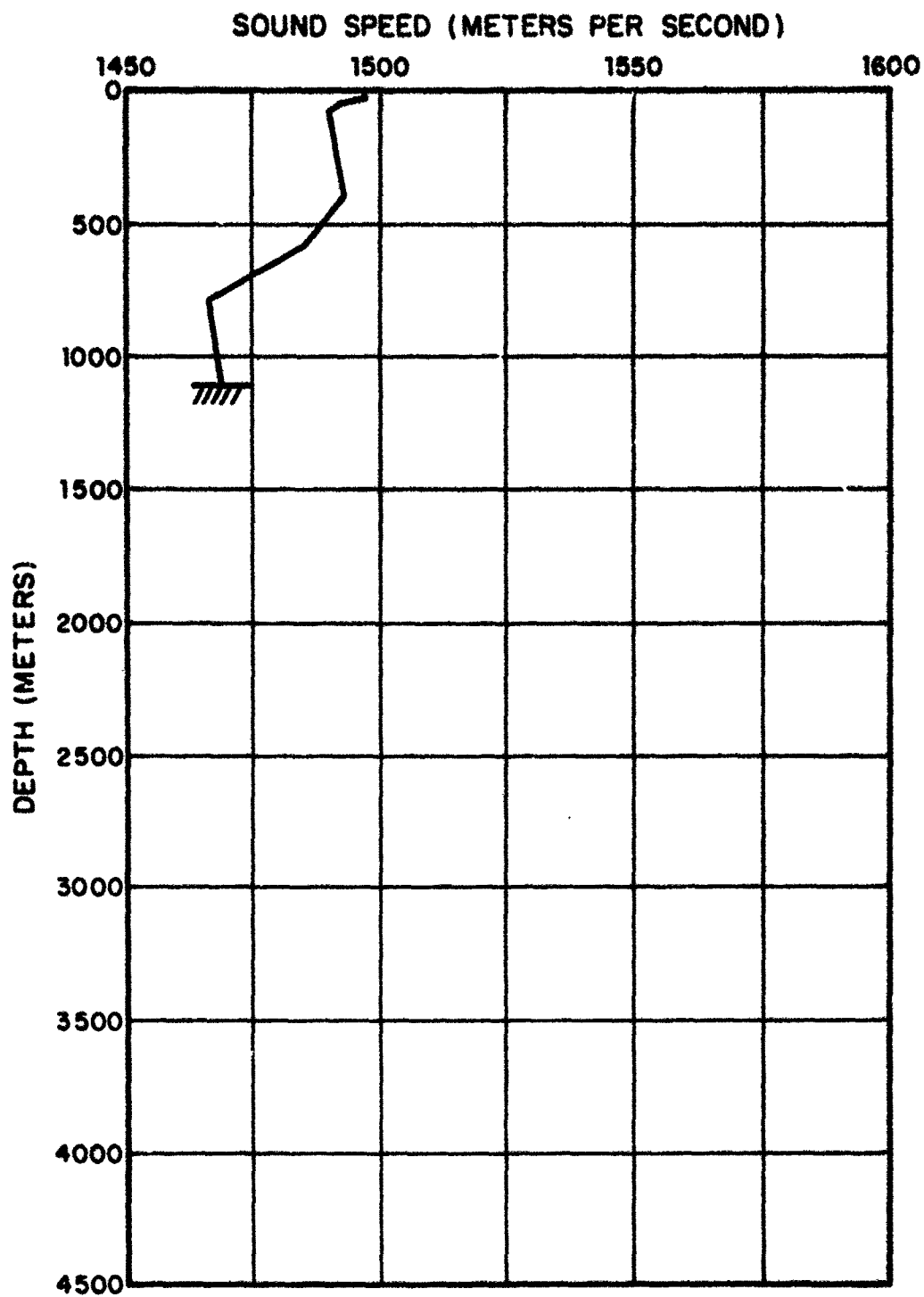
DATE	REVIEW	DATE	REVIEW

ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS
FOR ASW

Volume XIII: Area 4B SUMMER
PREDICTIONS FOR PASSIVE SONAR



Refer to Volume 1 of this report for an explanation of the
plot format and descriptions of models and ocean areas.



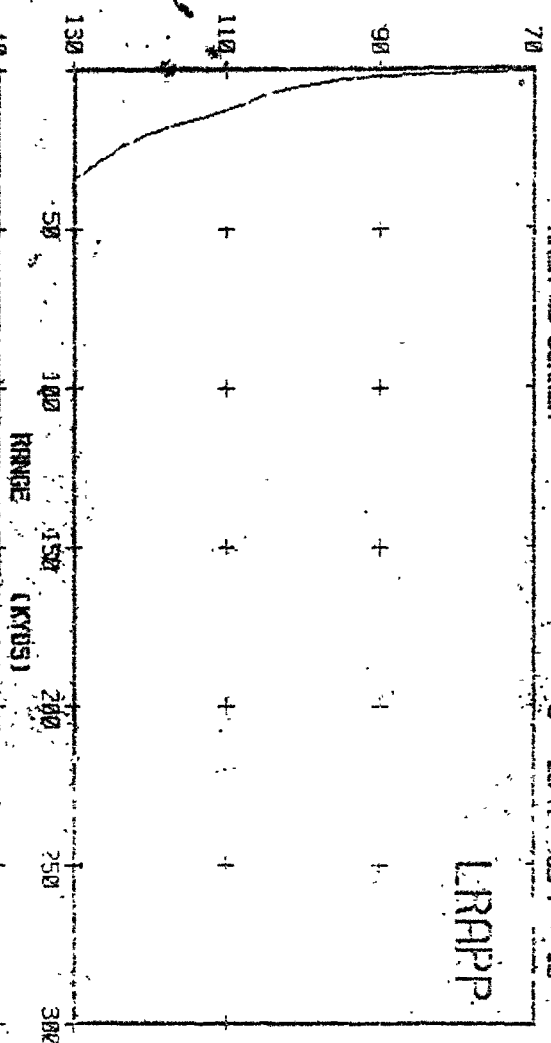
**SOUND SPEED PROFILE
AREA 4B, SUMMER**

PRELIMINARY

20 ft. 10

1450 M/S 1500 1550

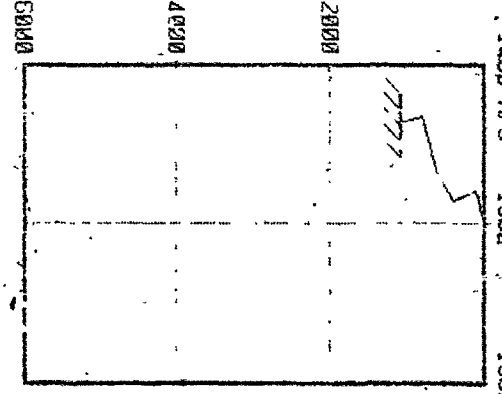
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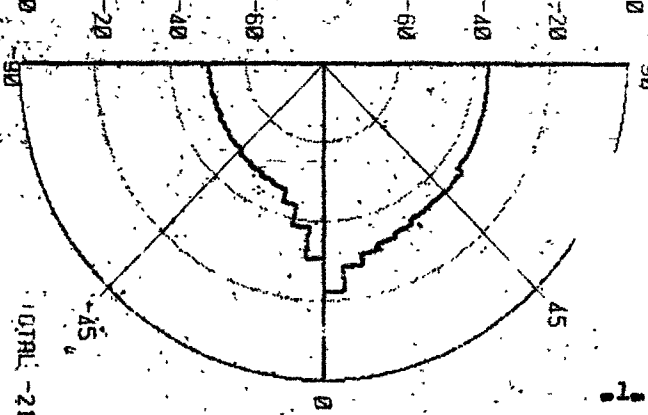
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



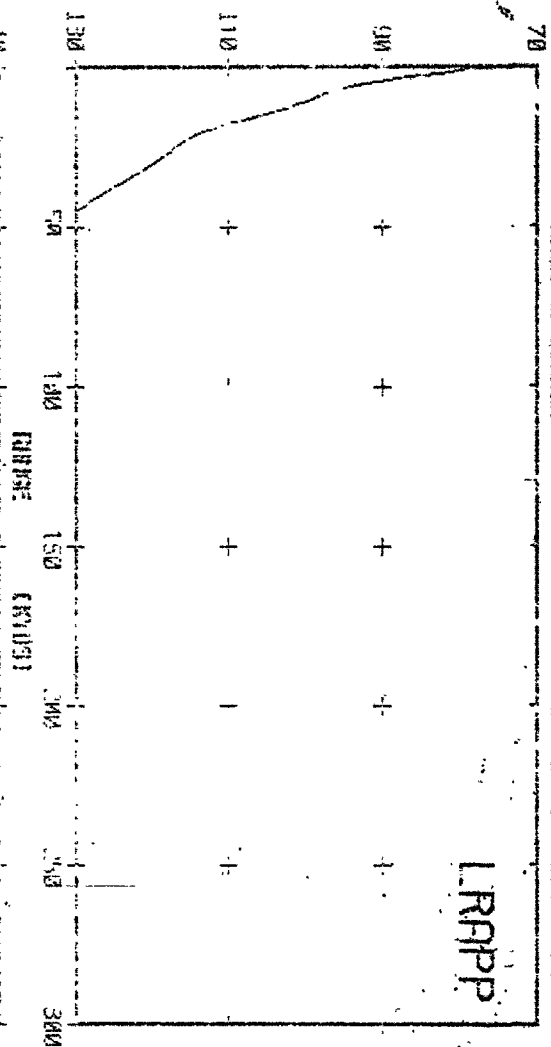
100% -21.3 DB

PRINCE AB SUMNER

S. 50 R. 00 F. 10

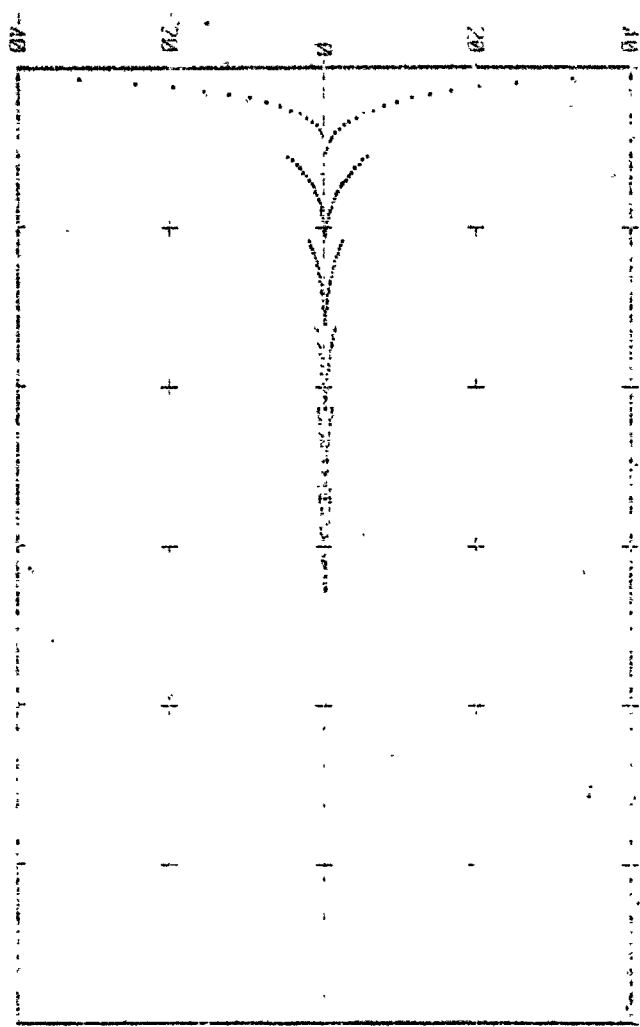
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DB LOSS

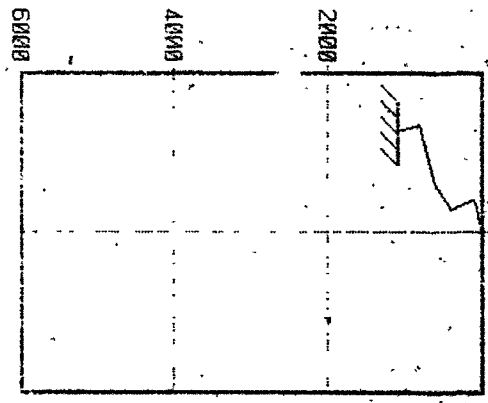


L.RAPP

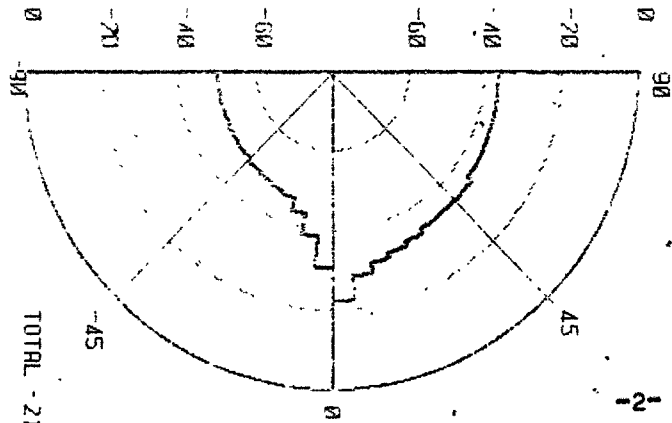
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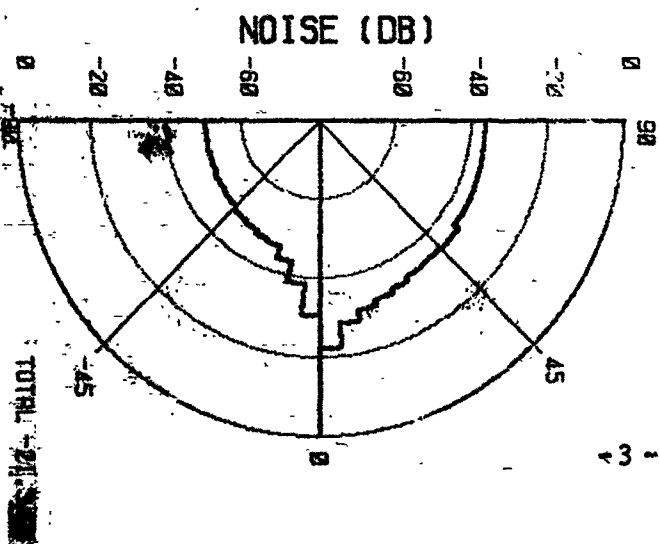
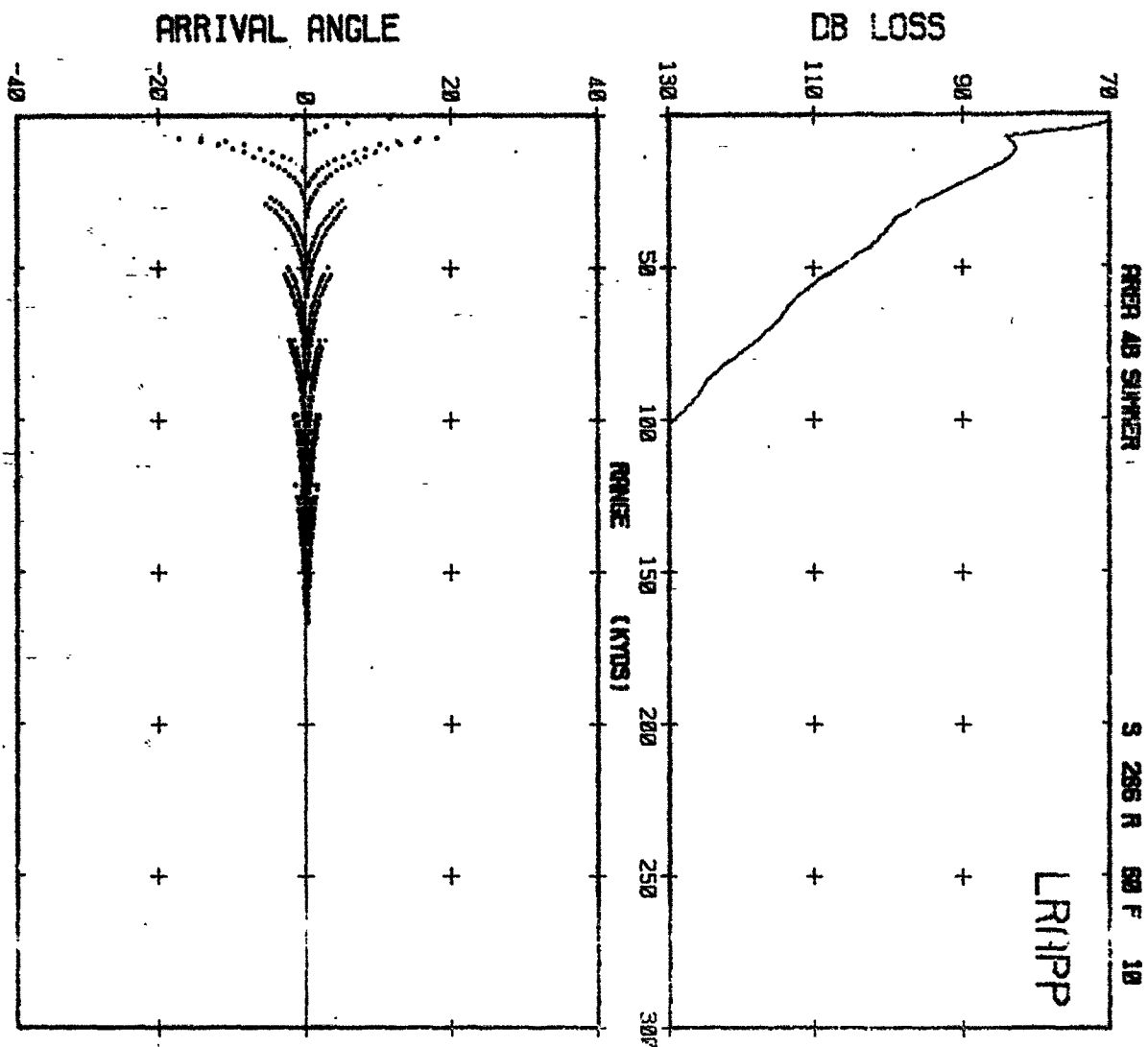
DEPTH IN METERS



NOISE (DB)

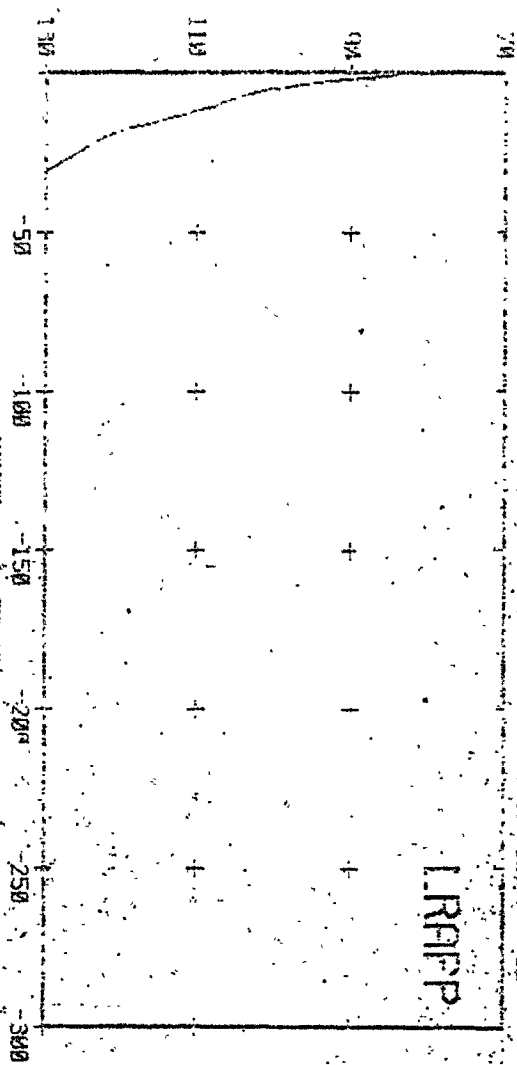


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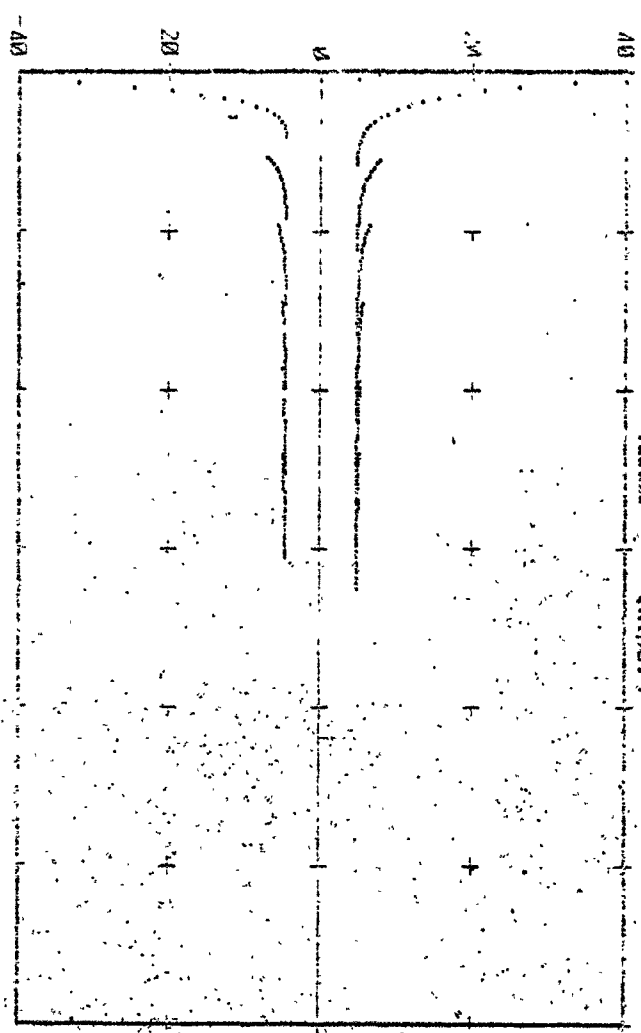


PREP: AG SURFER
 3. 29 N. 1450 W/S 1500 1550
 1. RAIP

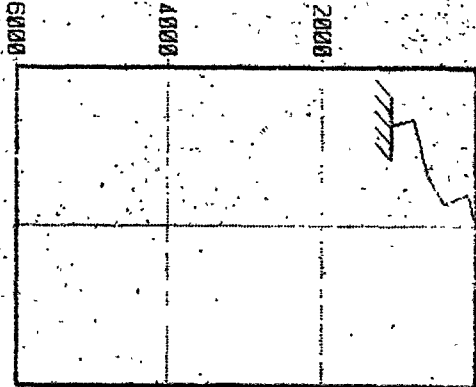
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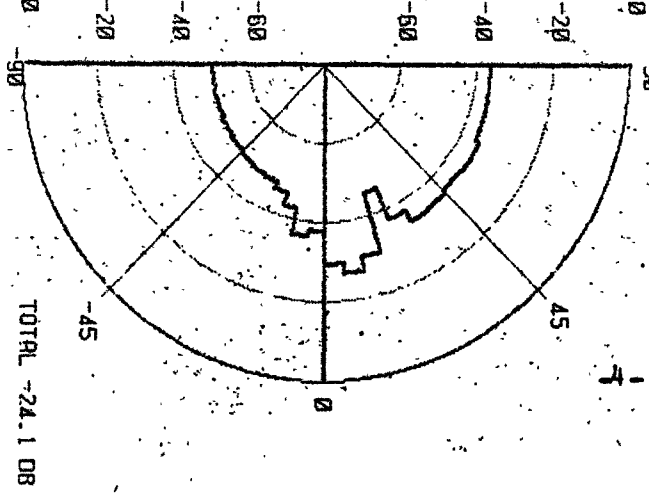
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



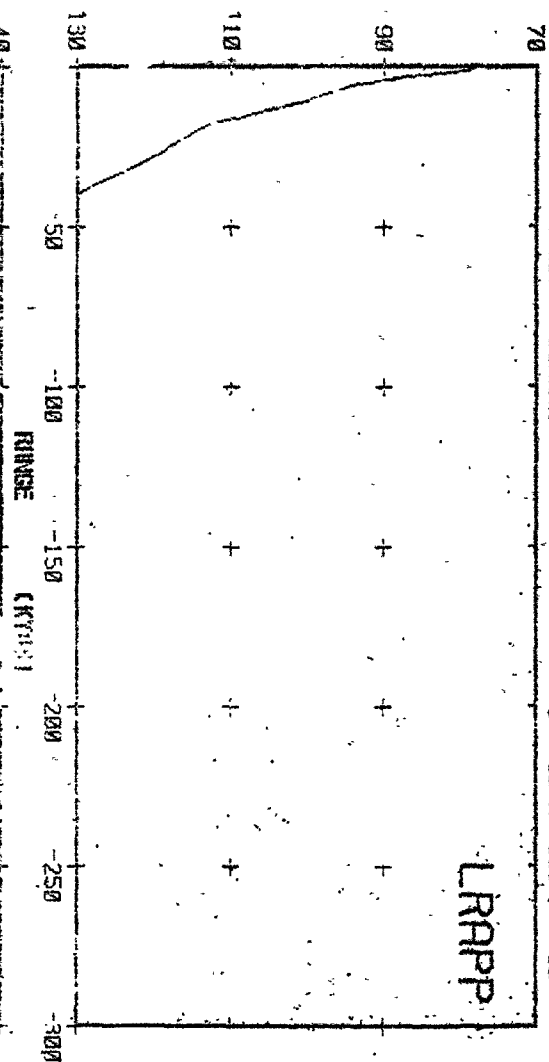
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GREEN 408 SUMMER

S 50 R 100 F 10

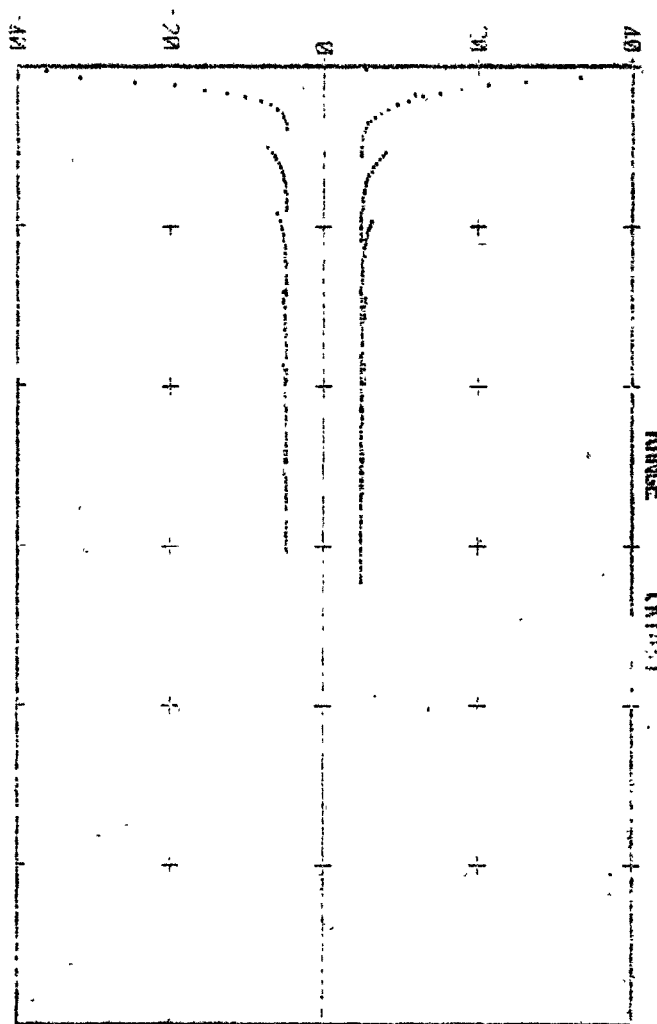
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DB LOSS

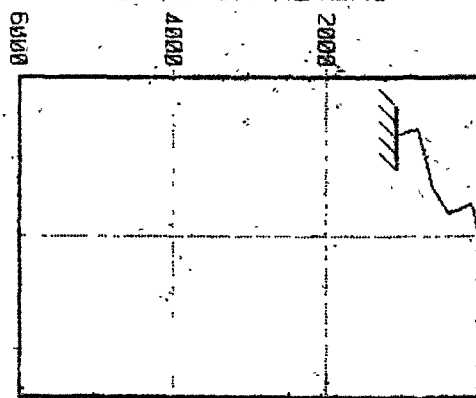


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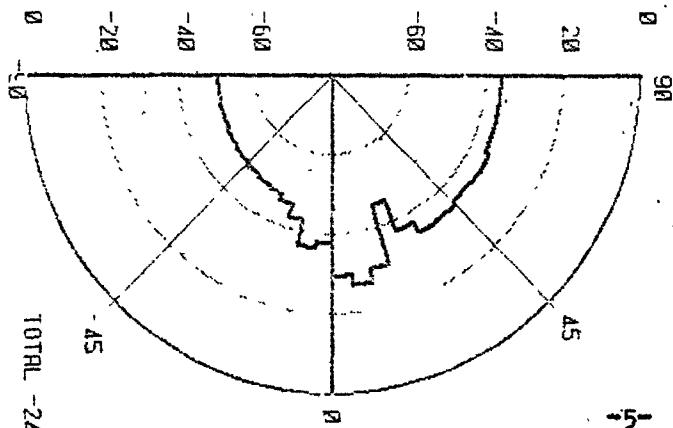
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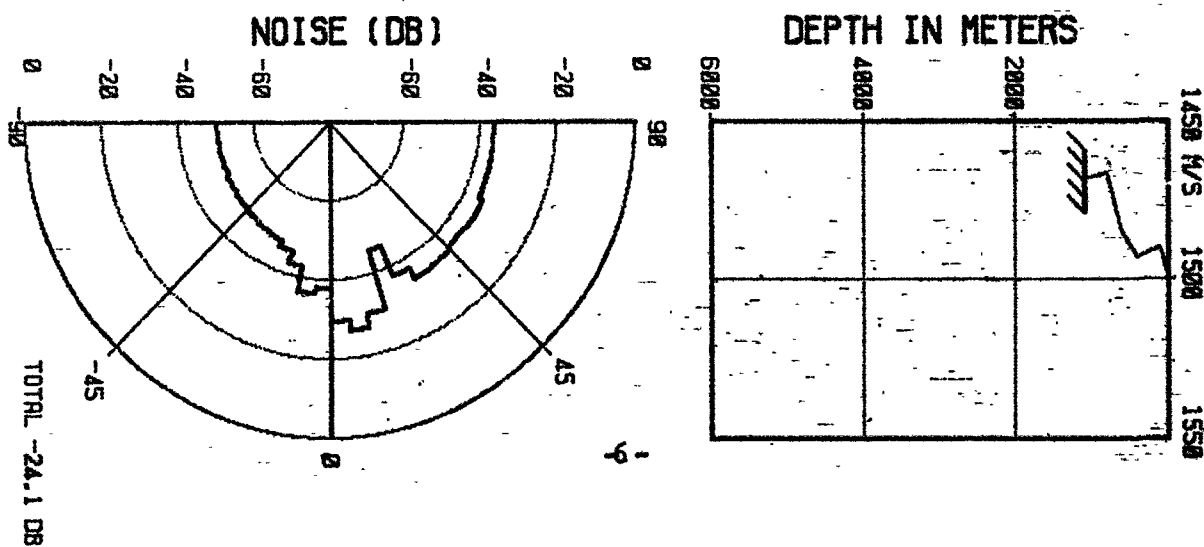
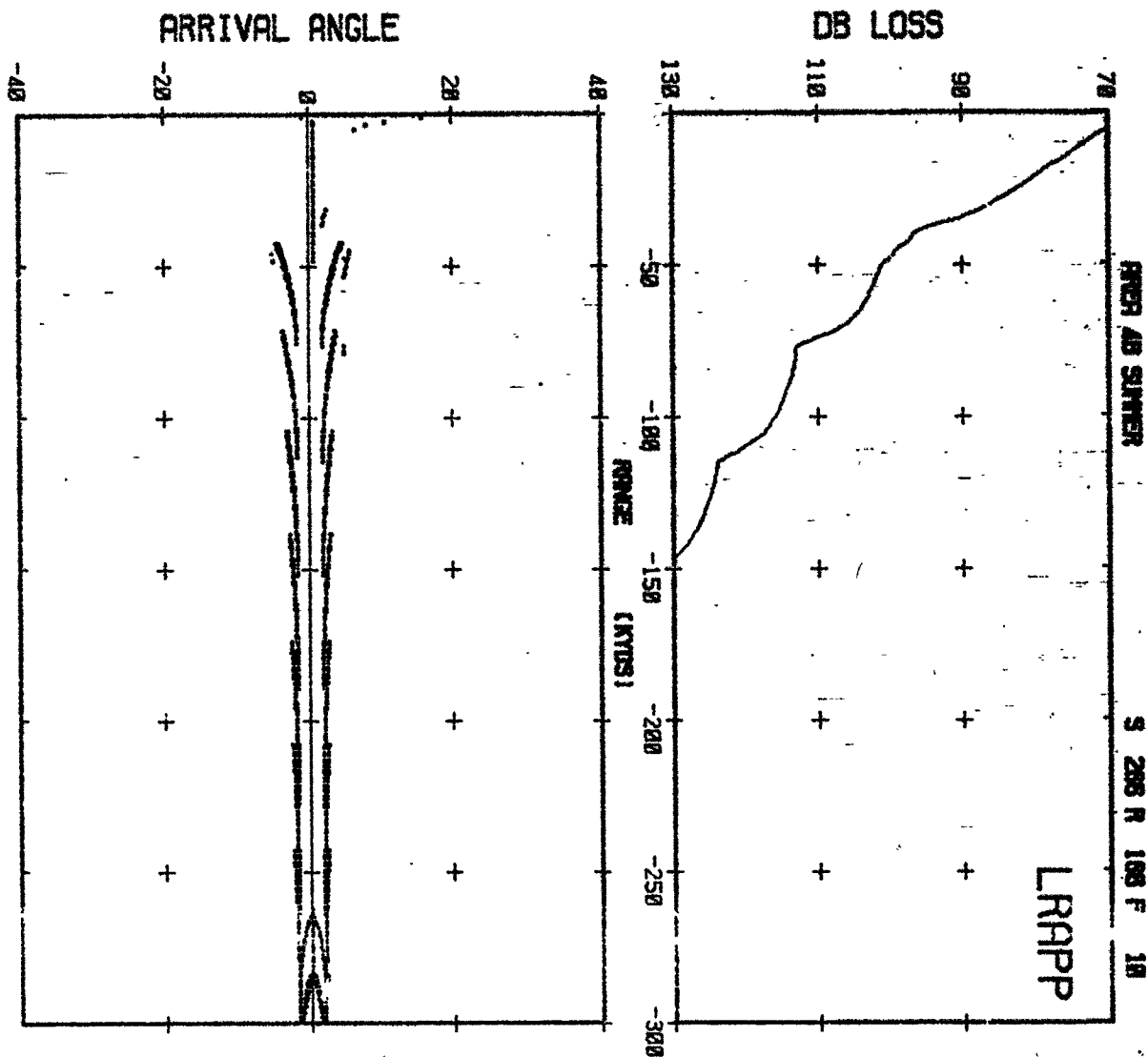
DEPTH IN METERS



NOISE (DB)



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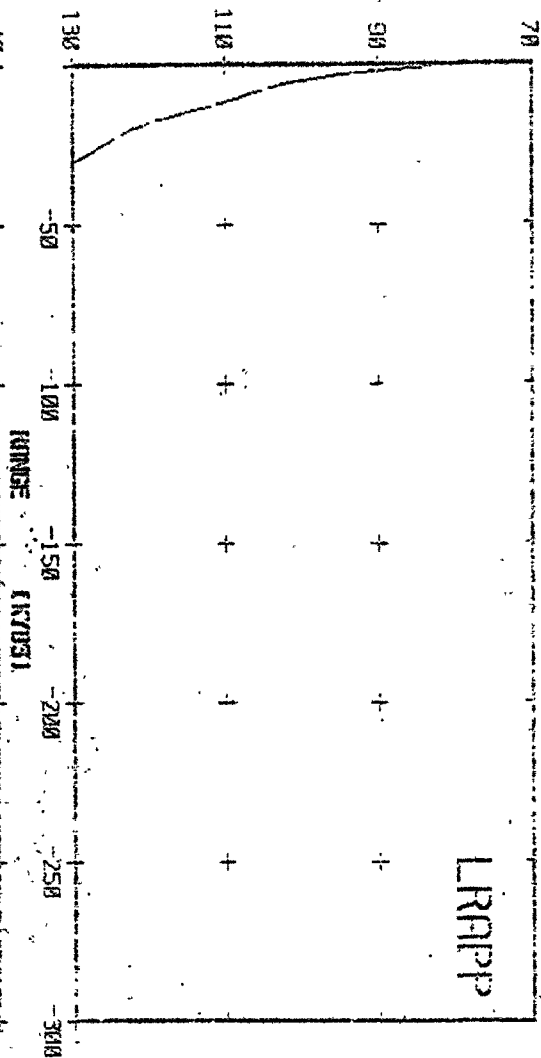


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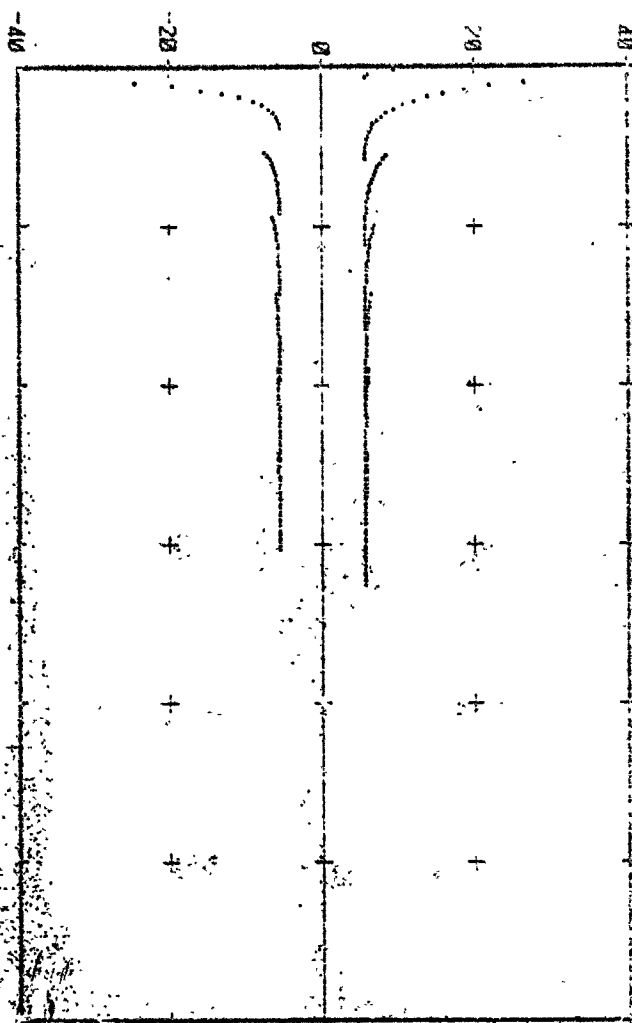
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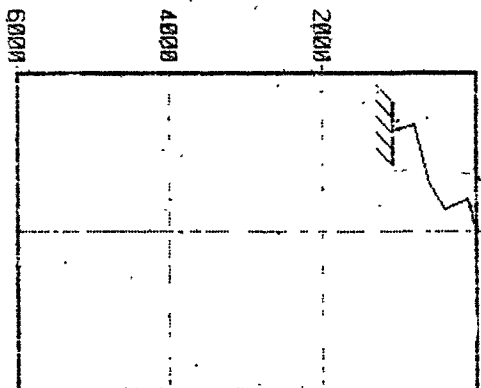
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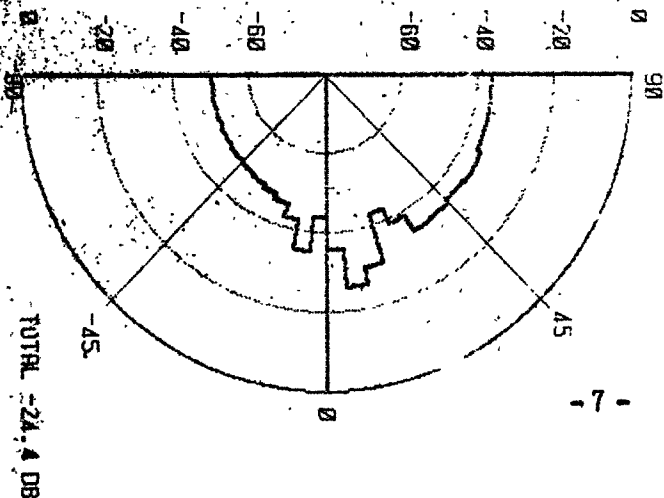
ARRIVAL ANGLE



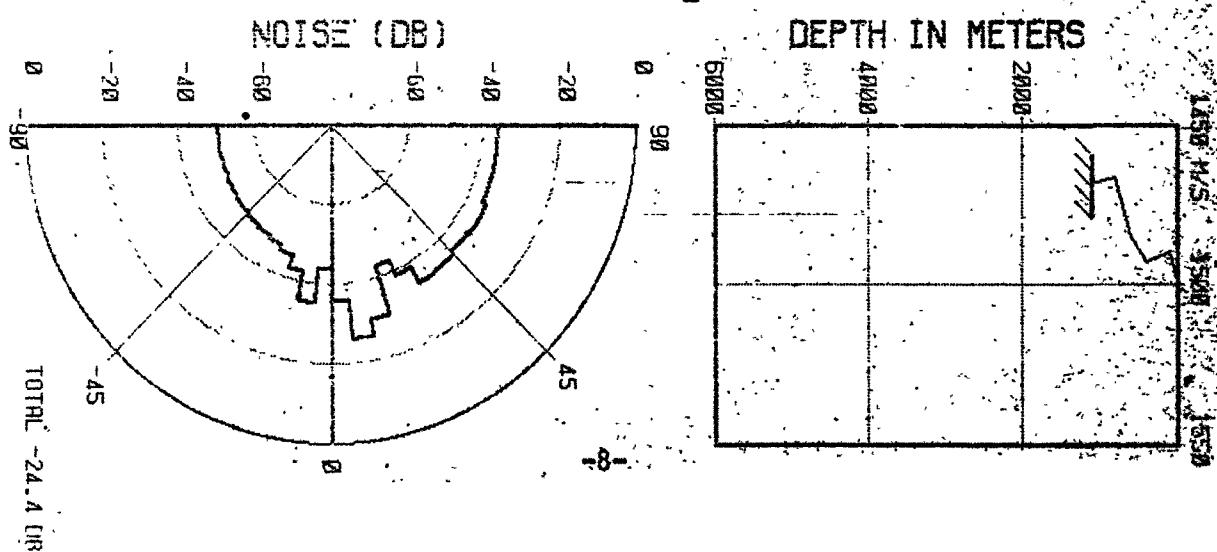
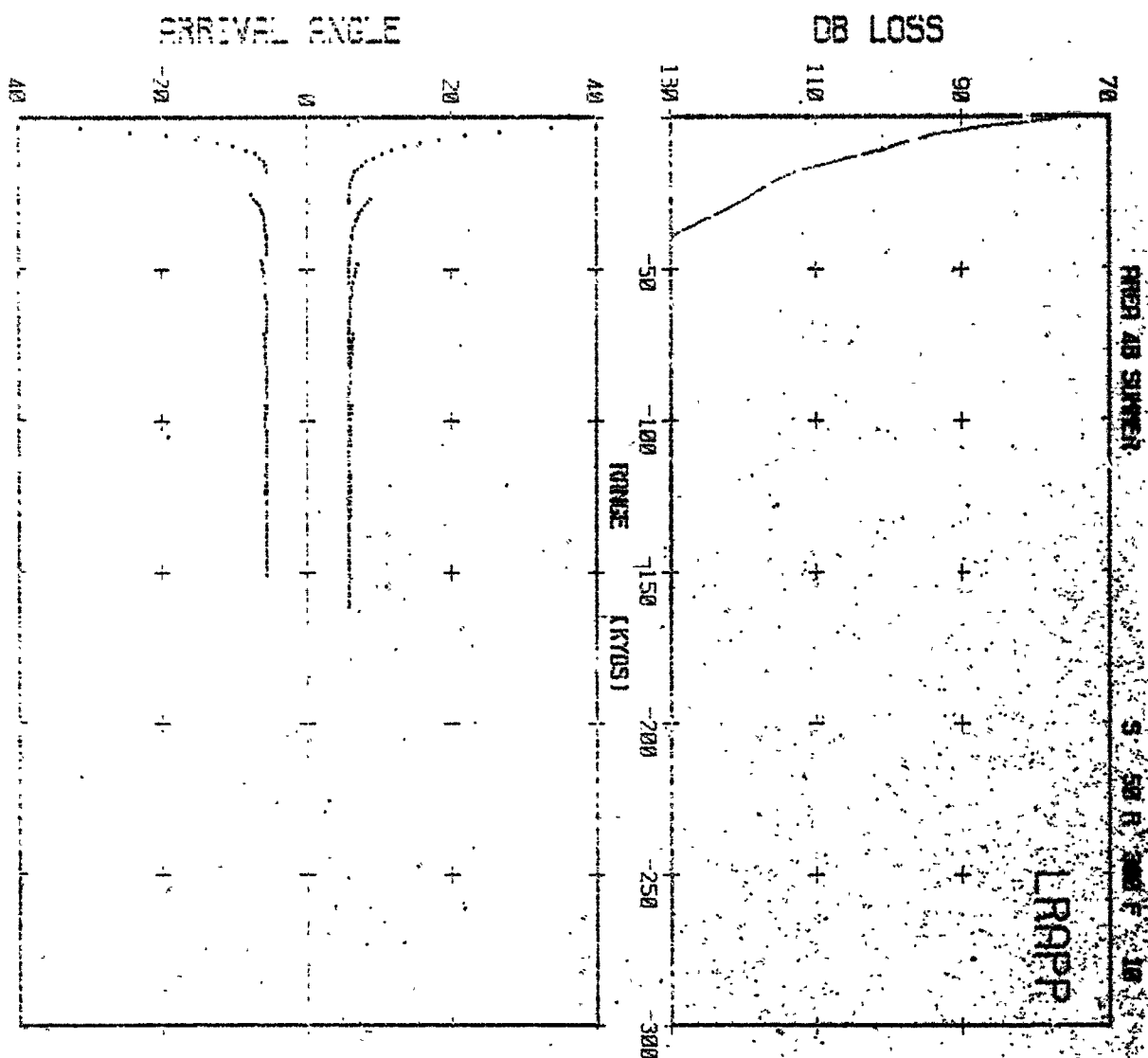
DEPTH IN METERS



NOISE (DB)



TOTAL -24.4 DB

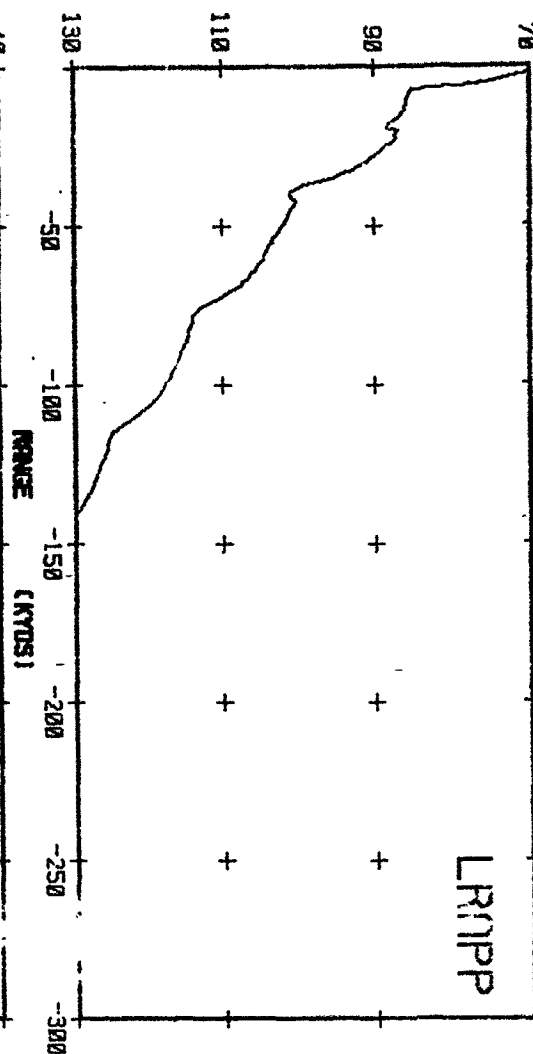


RIVER AB SUMMER

S 286 R 300 F 10

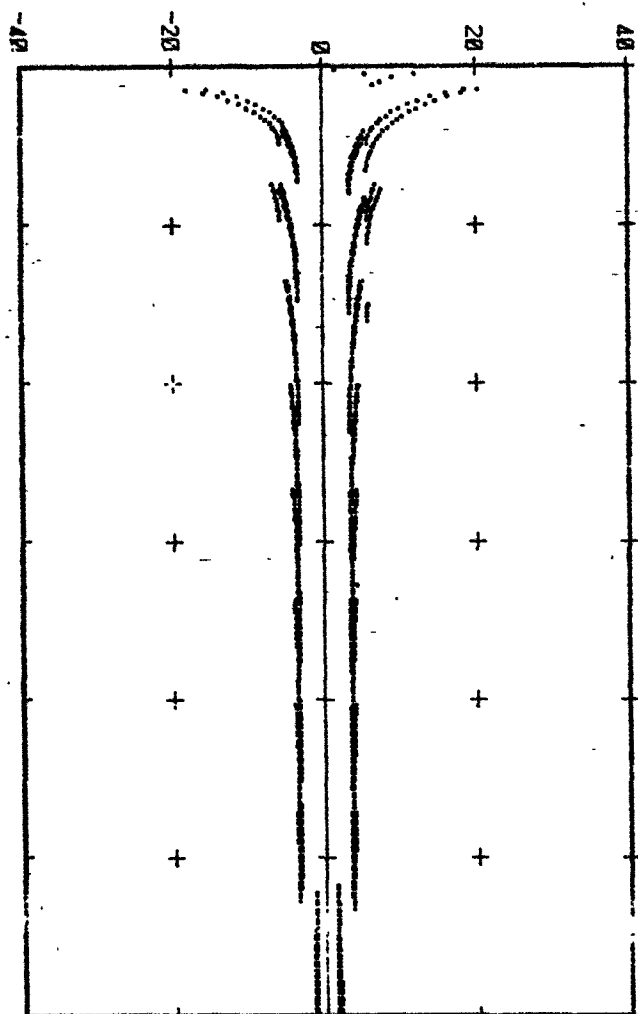
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DB LOSS

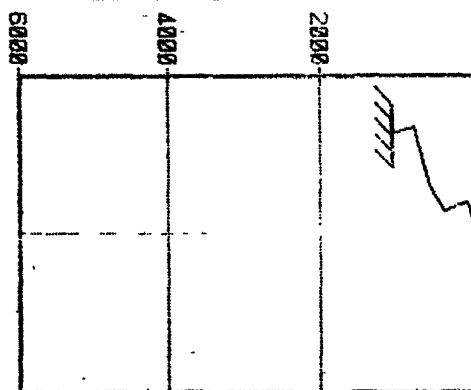


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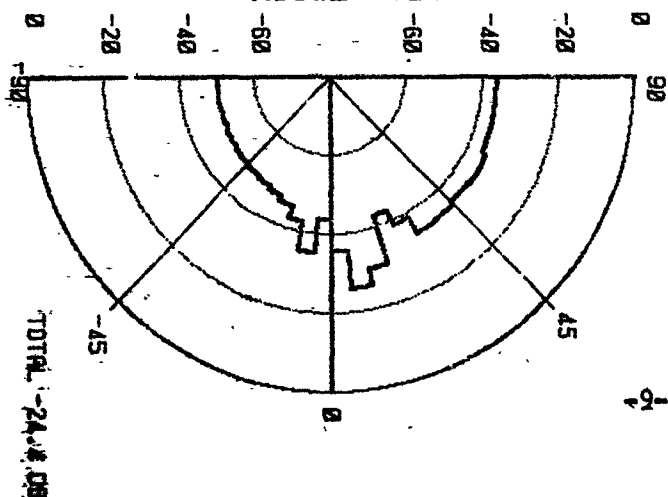
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



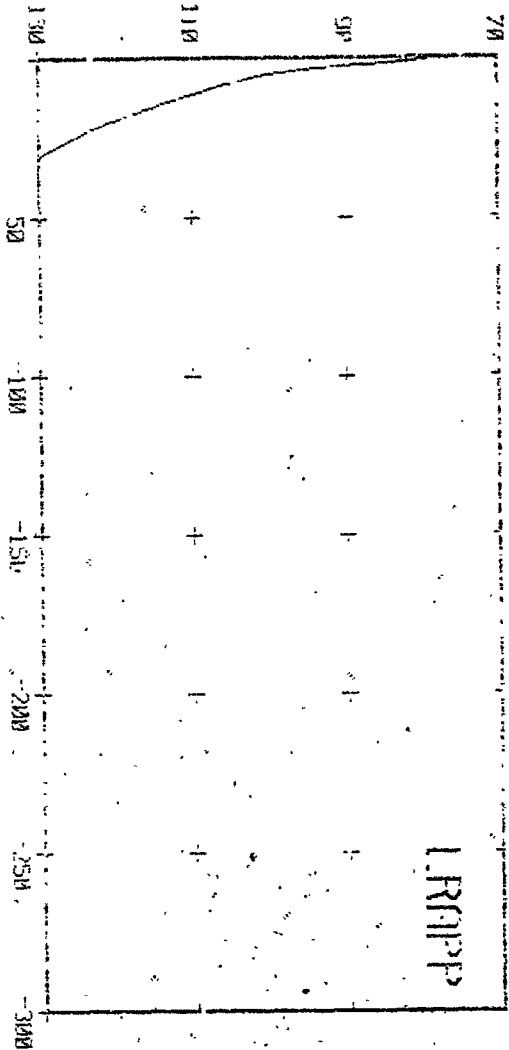
TOTAL -24.4 DB

RIVER A3 SUMMER

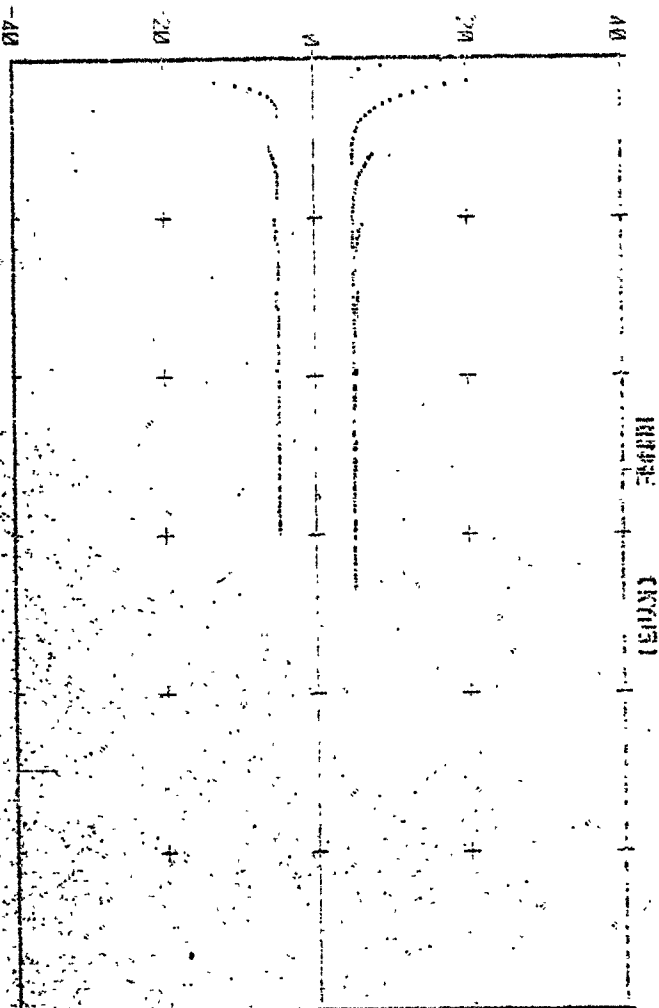
S 204 R 1000 F 10

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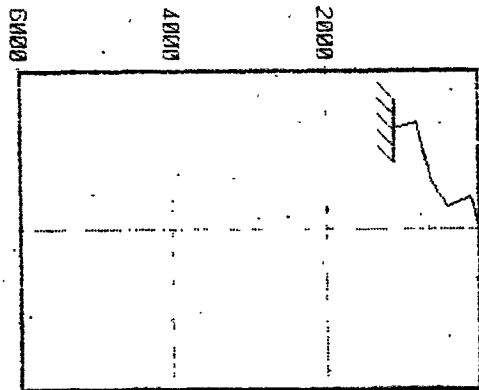
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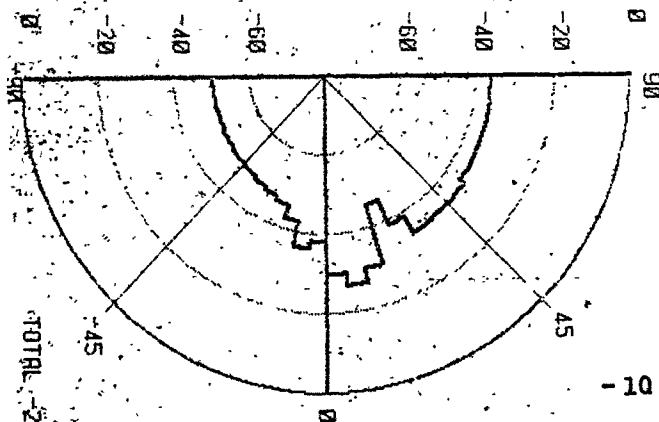
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

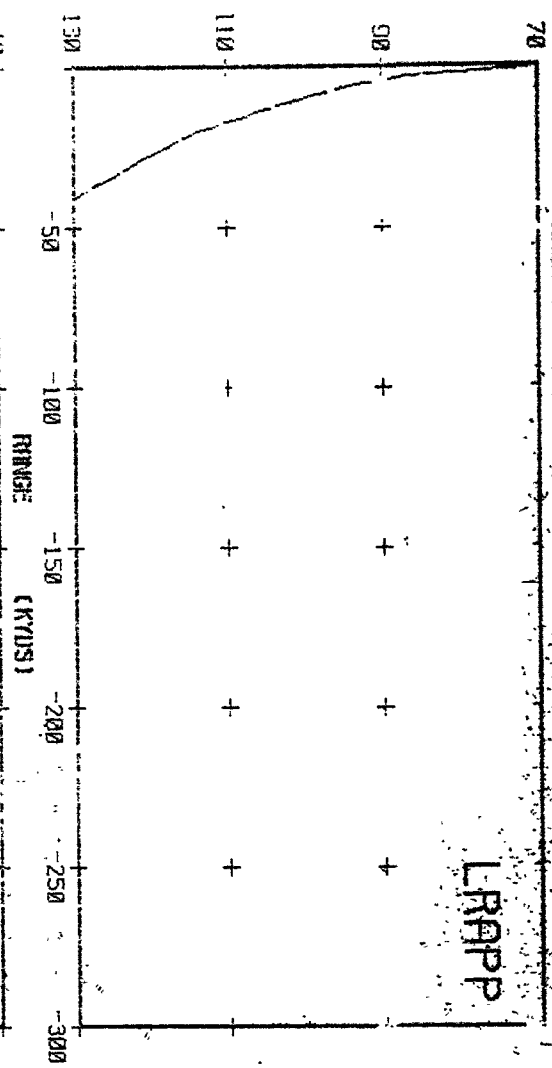


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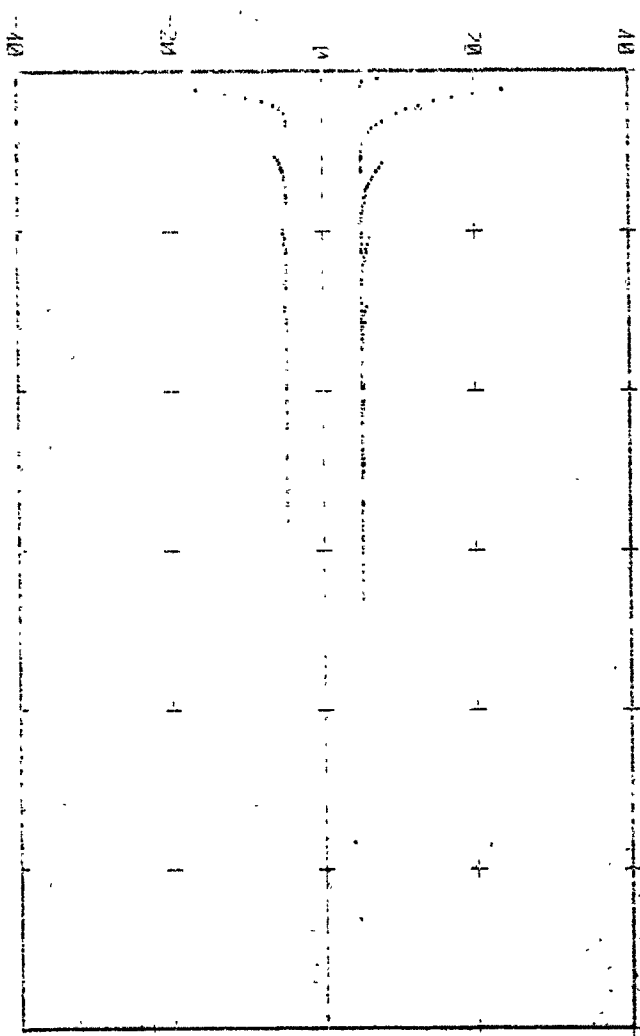
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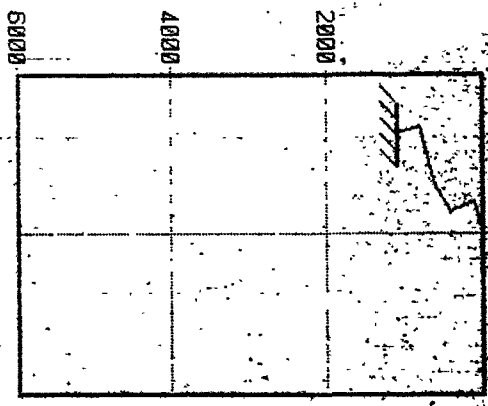
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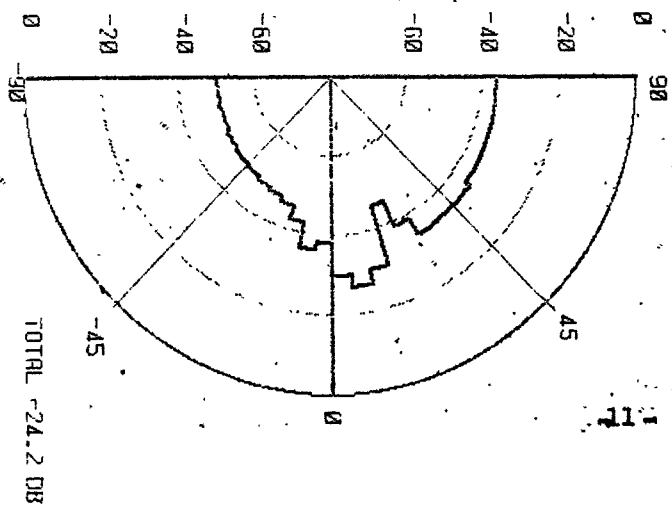
LEVEL DB



DEPTH IN METERS



NOISE (DB)



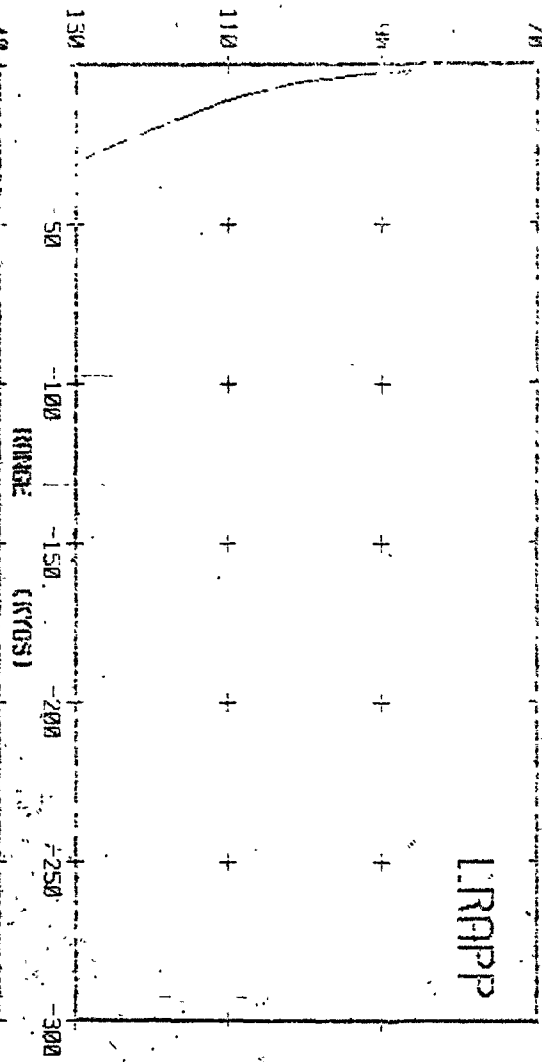
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S 20 R 1312 F 10

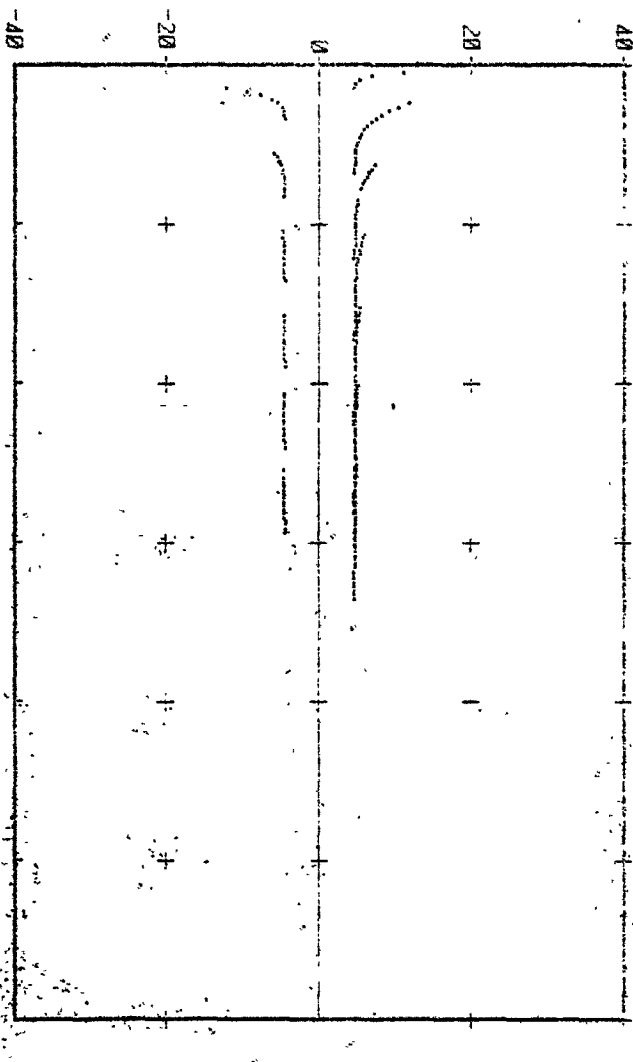
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LRRPP

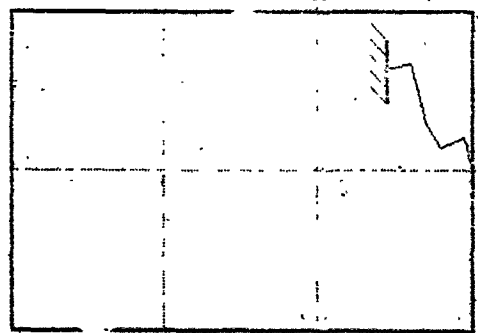
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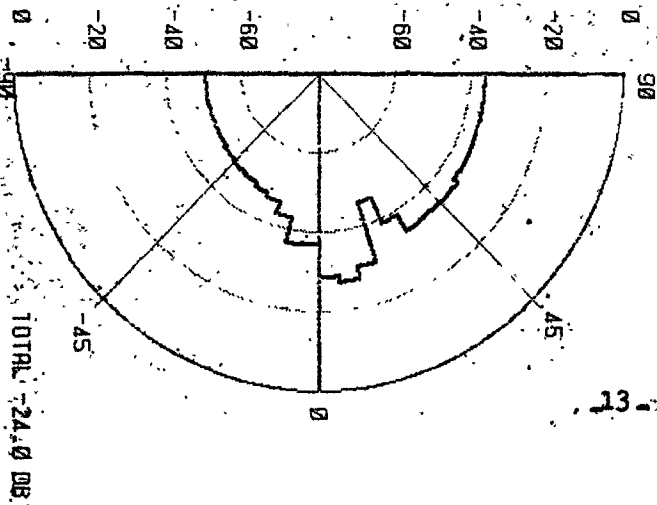
ARRIVAL ANGLE



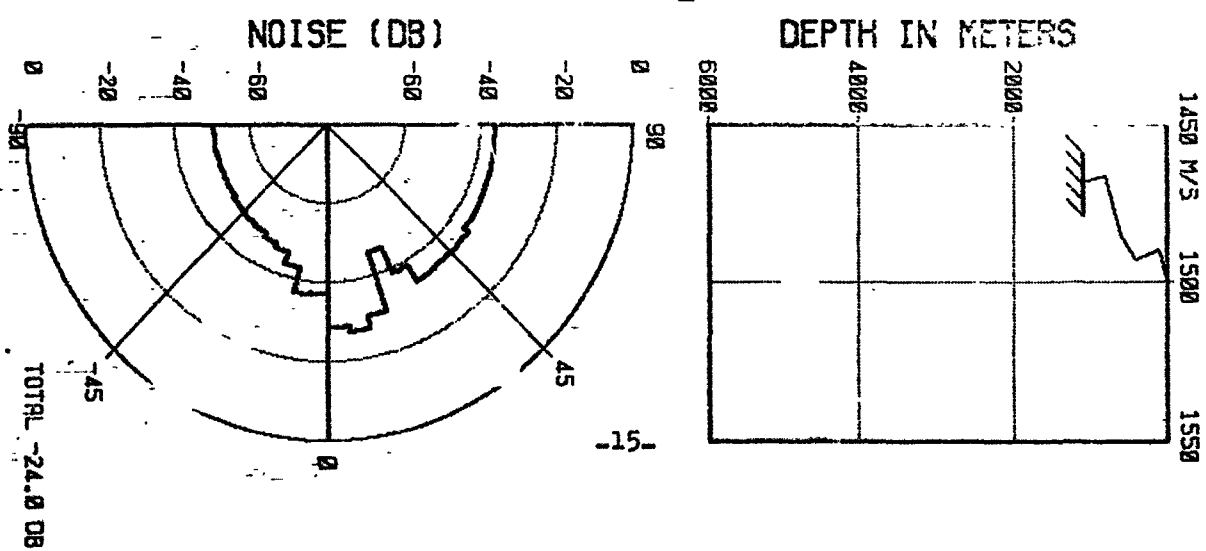
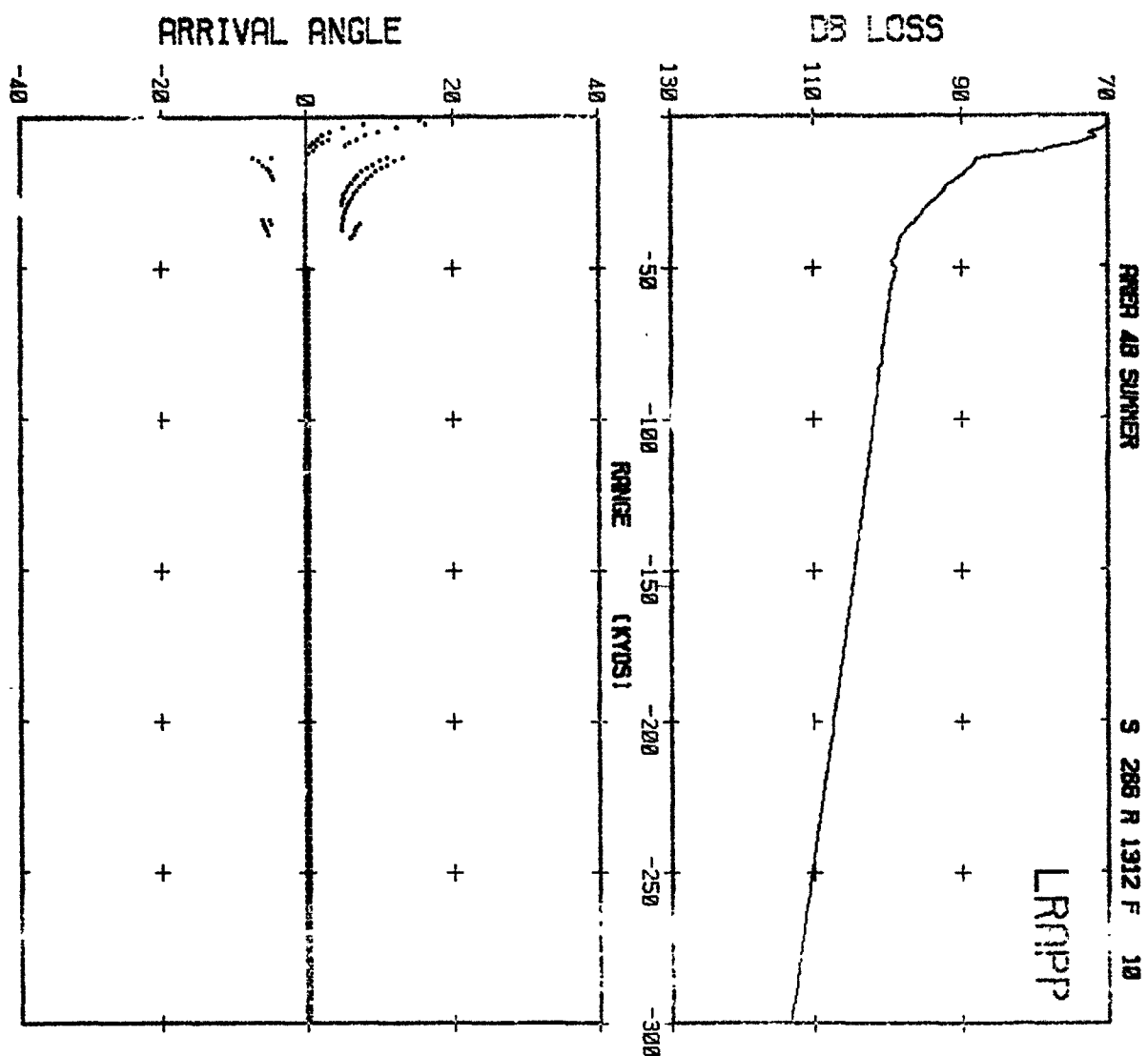
DEPTH IN METERS

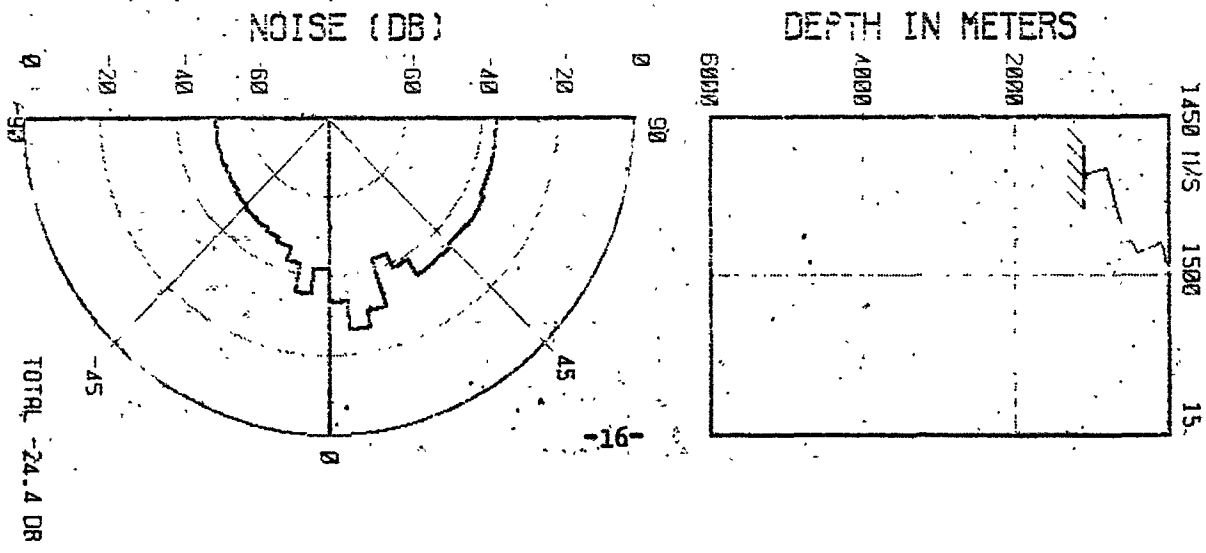
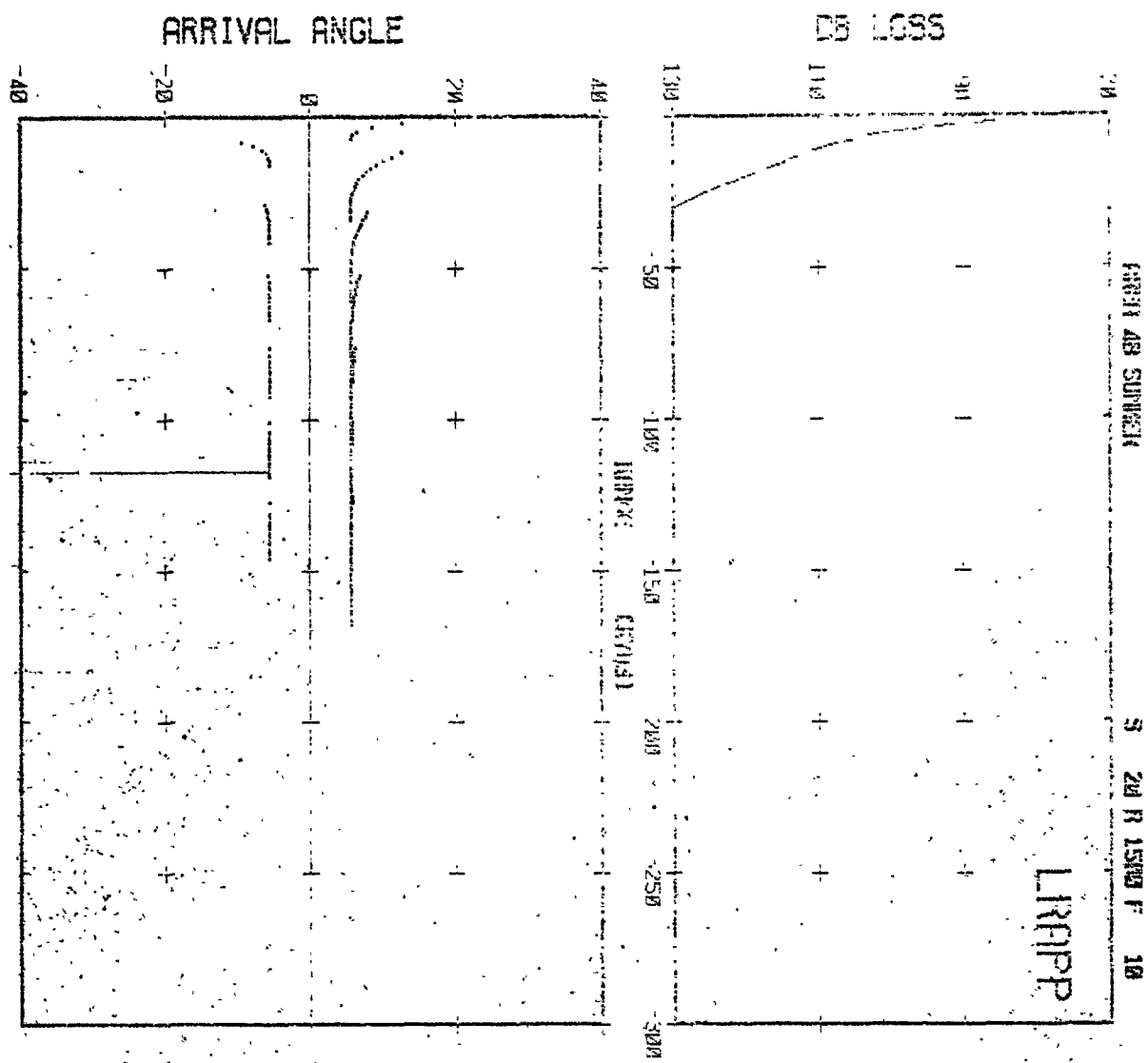


NOISE (DB)



TOTAL -24.0 DB





TOTAL -24.4 DB

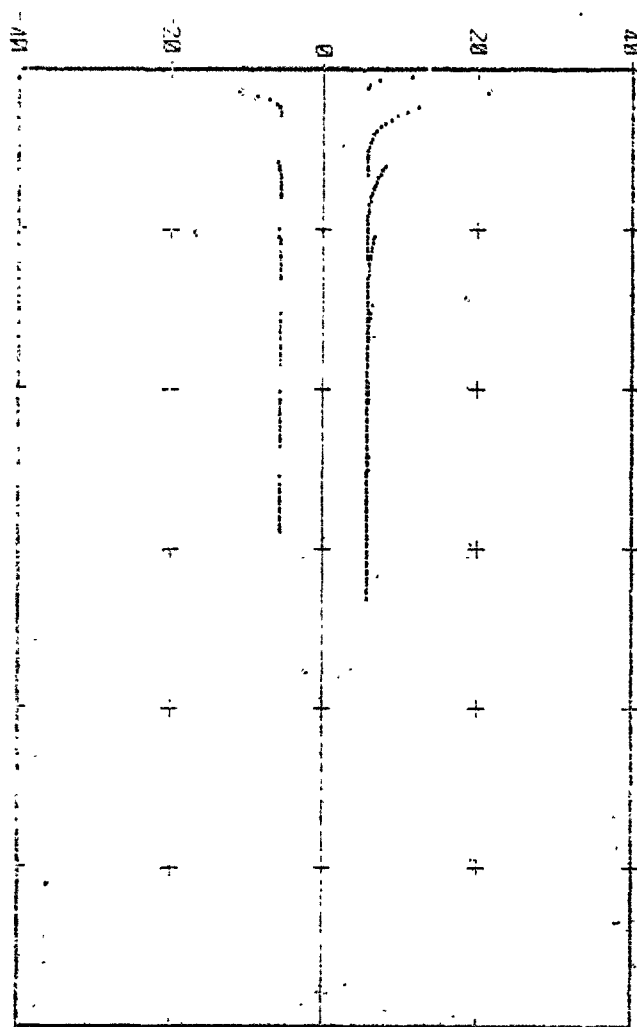
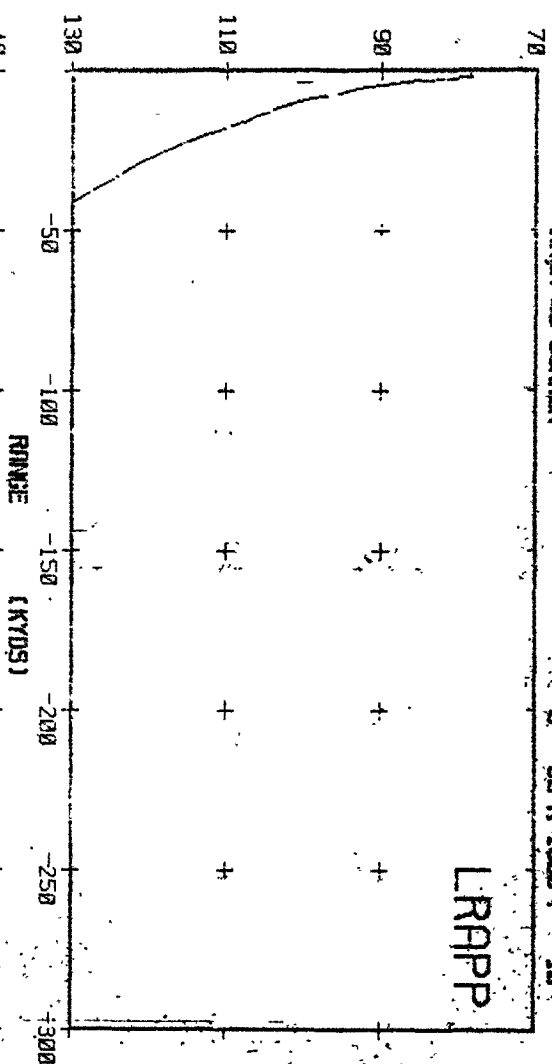
DB LOSS

FRIDAY AB SUMMER

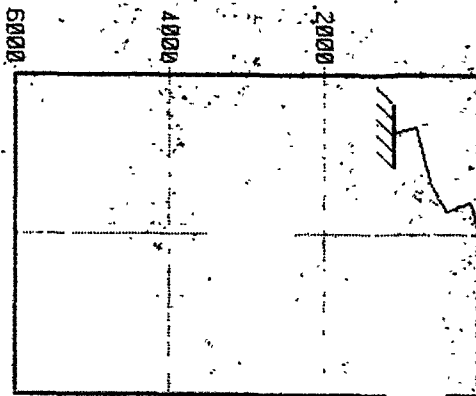
5 - 58 R 1500 F 10

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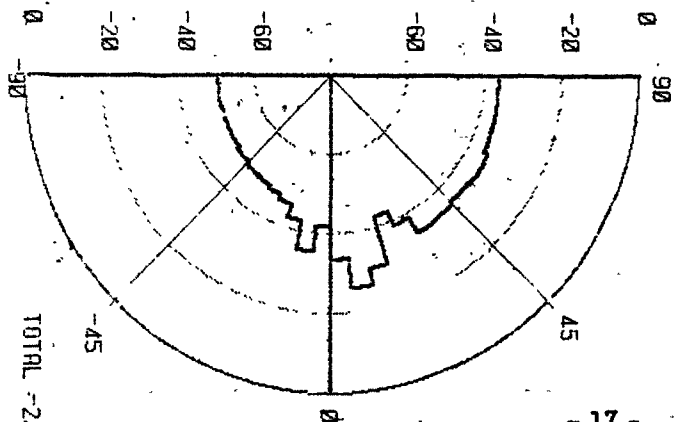
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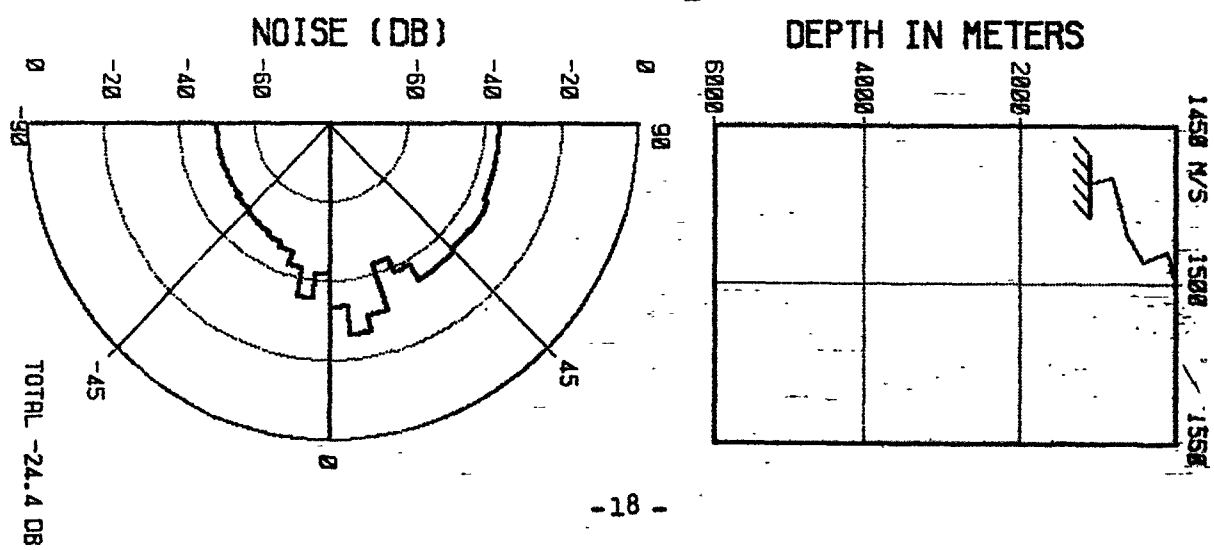
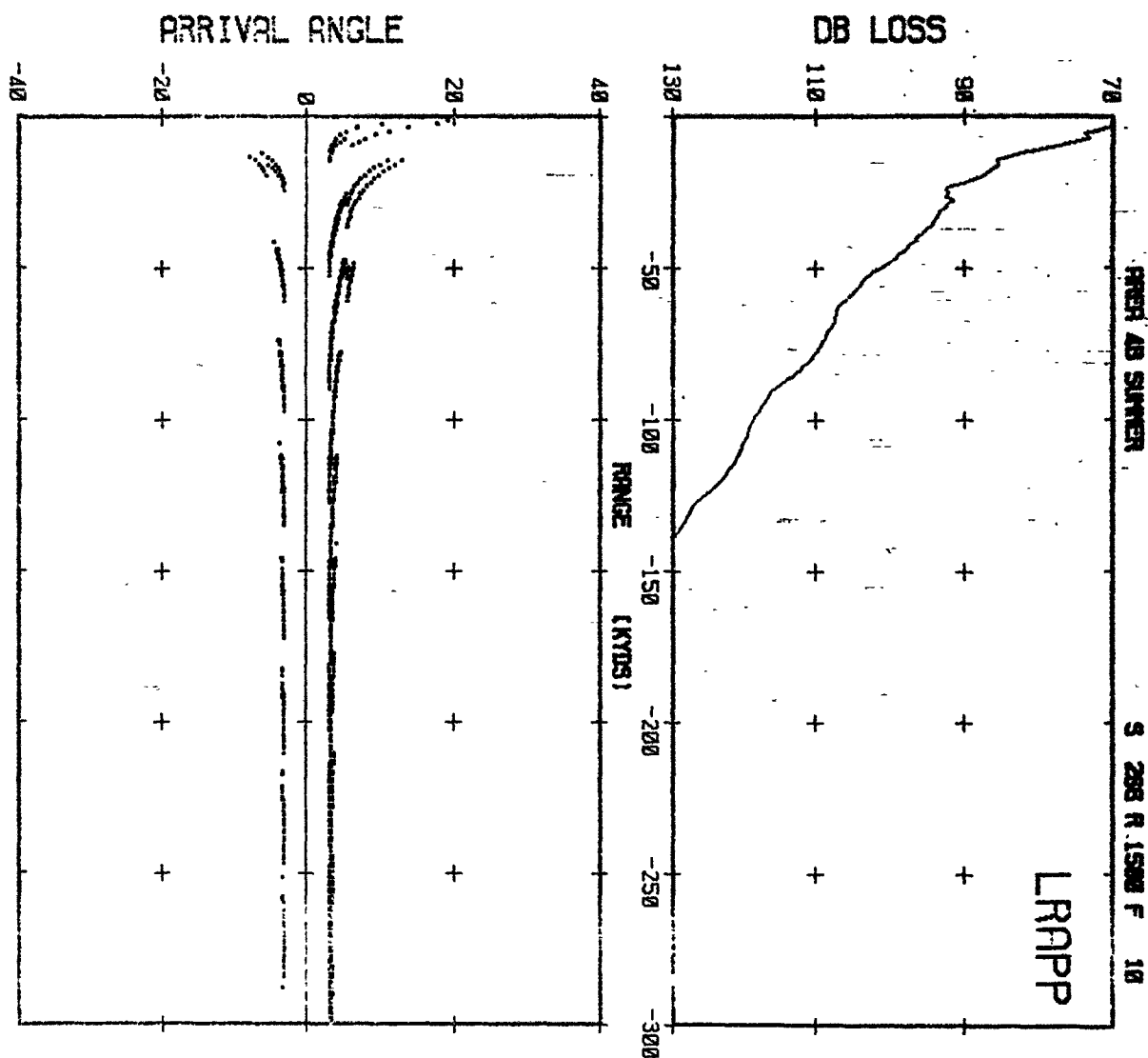
DEPTH IN METERS



NOISE (DB)



TOTAL -24.4 MB

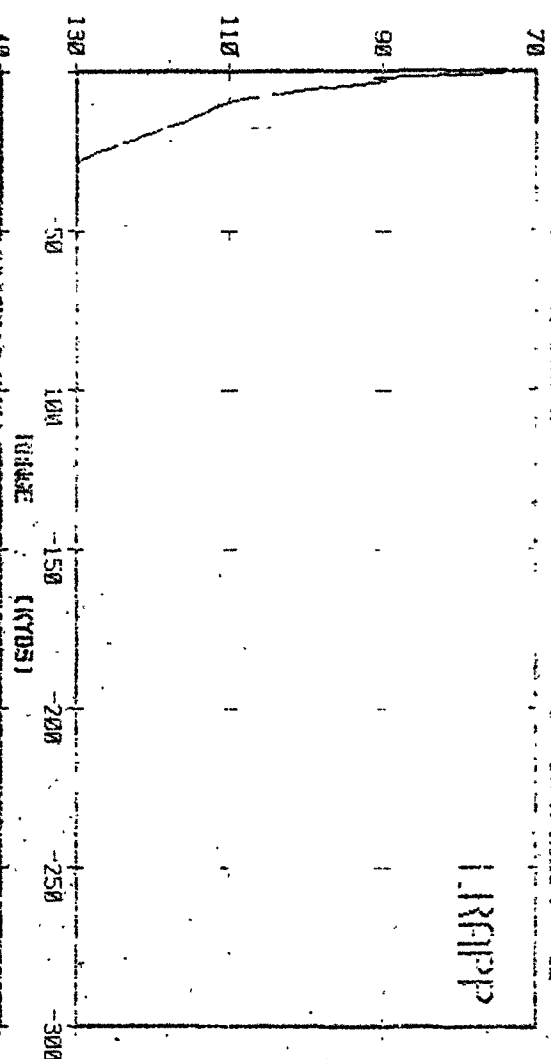


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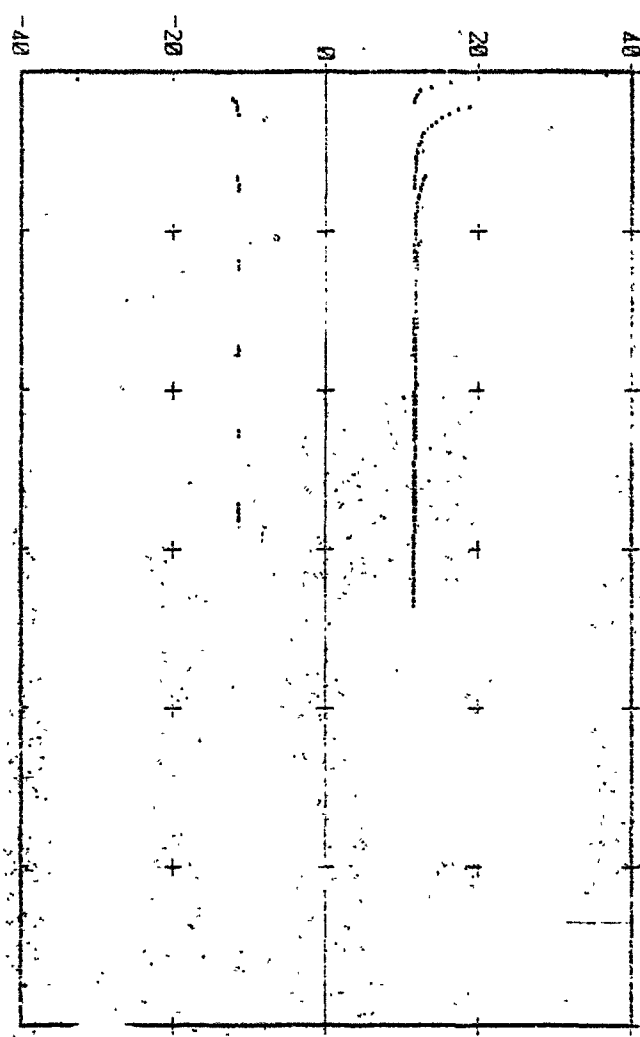
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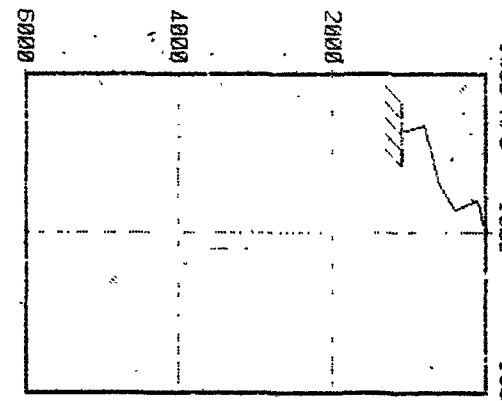
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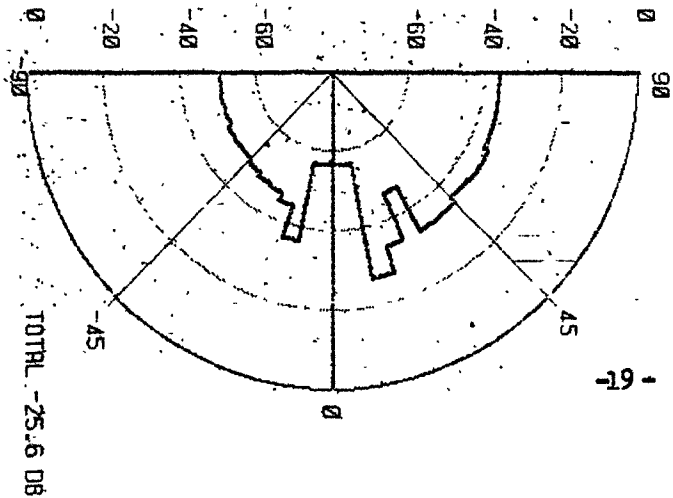
ARRIVAL ANGLE

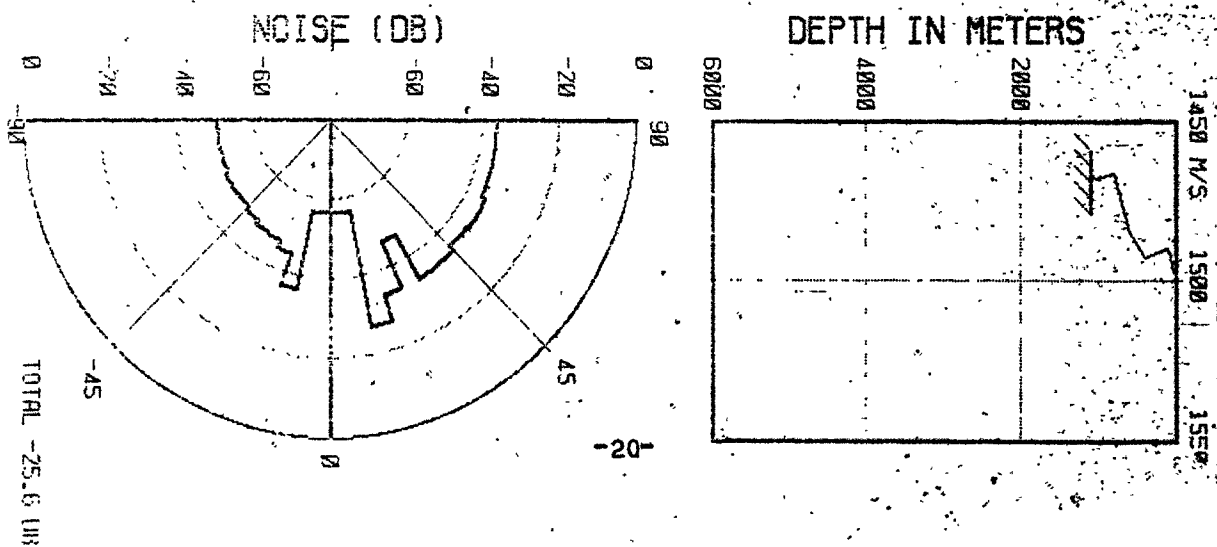
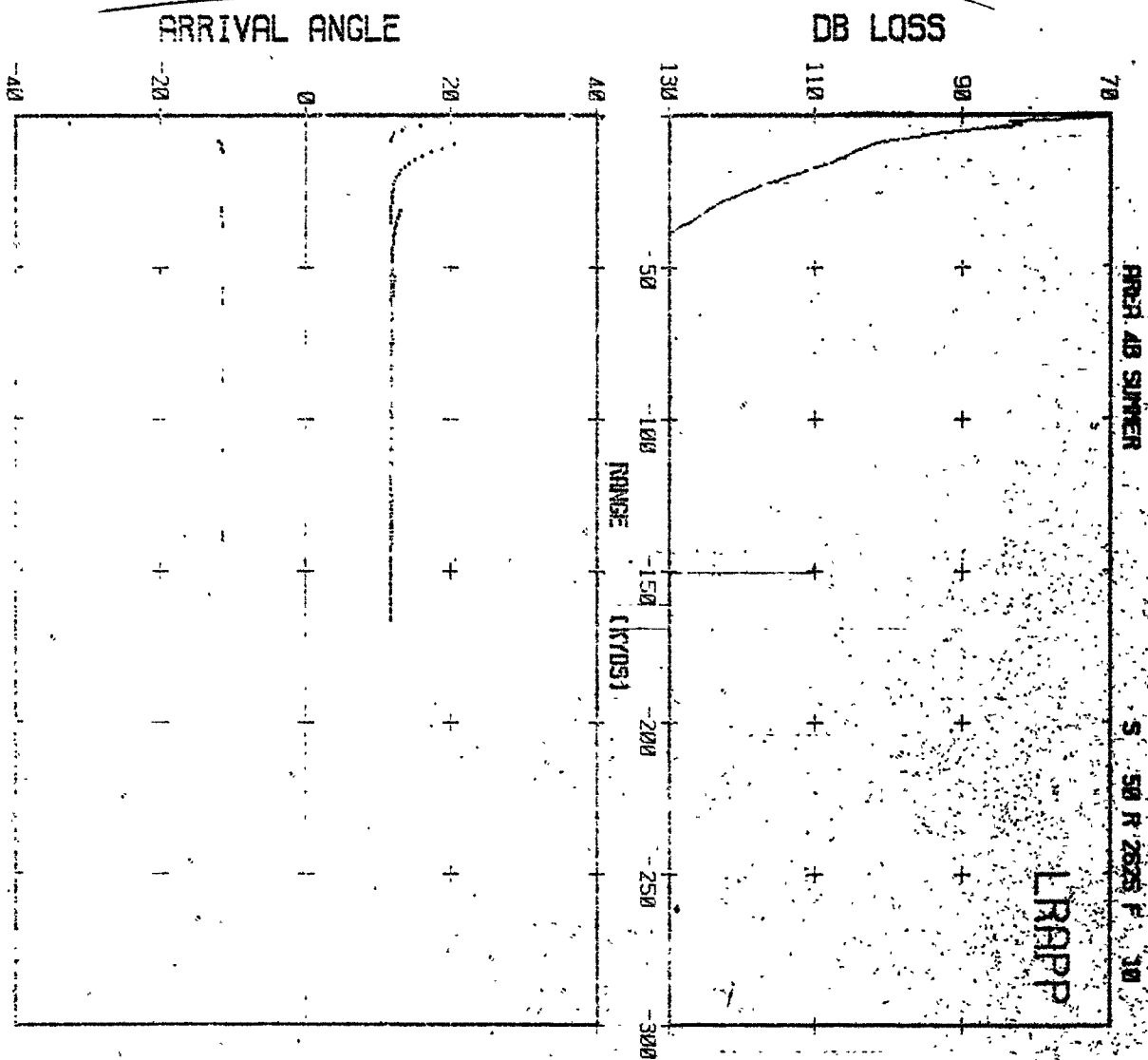


DEPTH IN METERS



NOISE (DB)



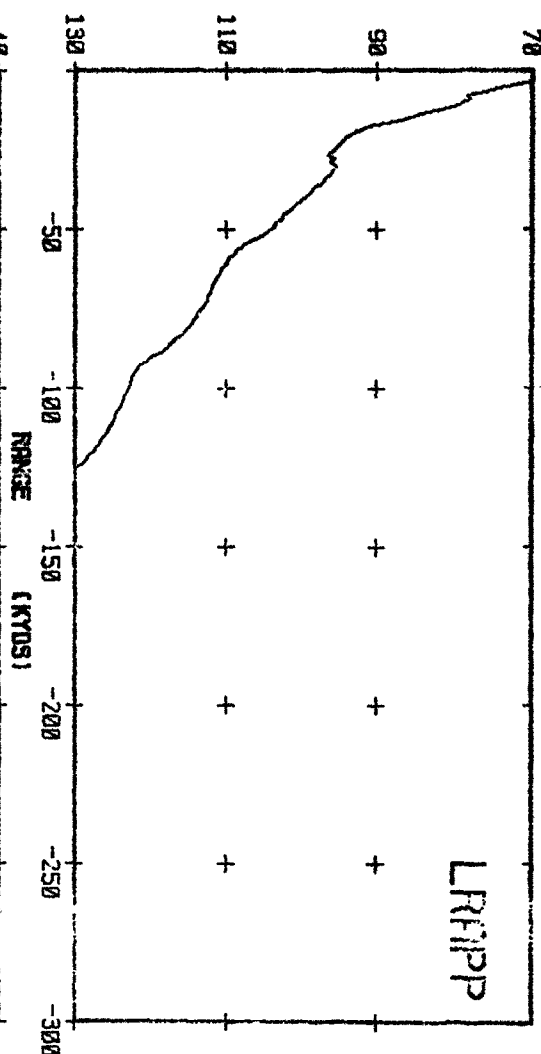


AREA AB SUMMEN

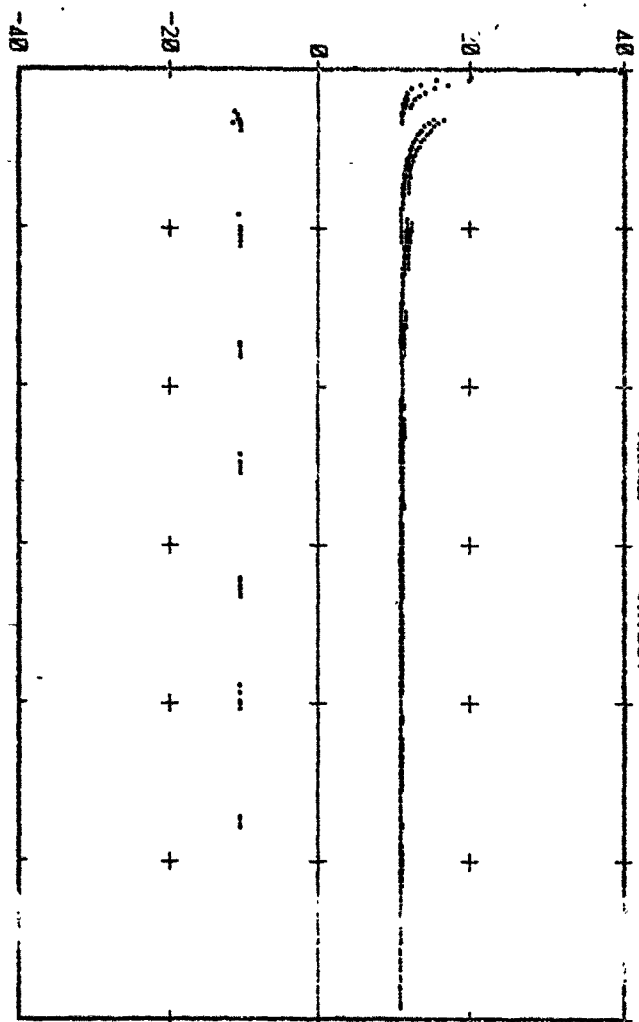
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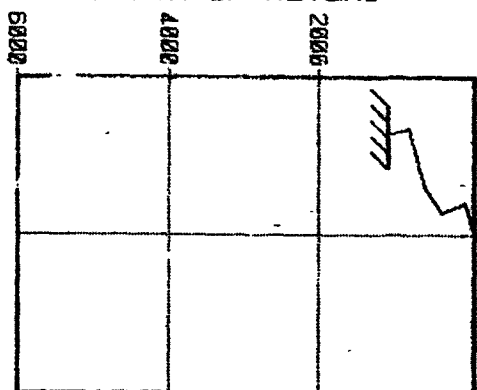
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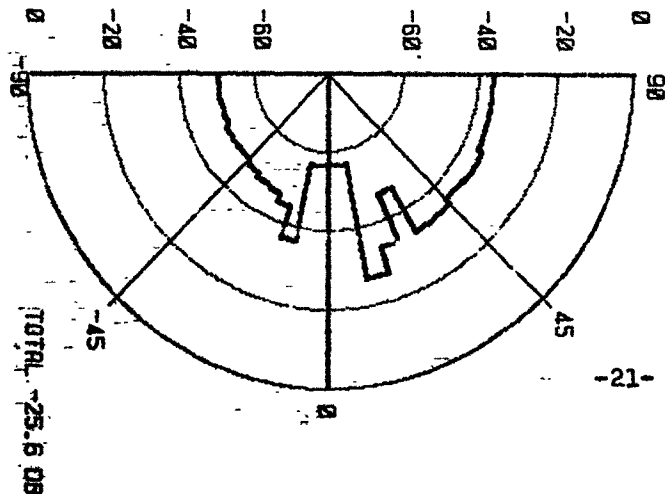
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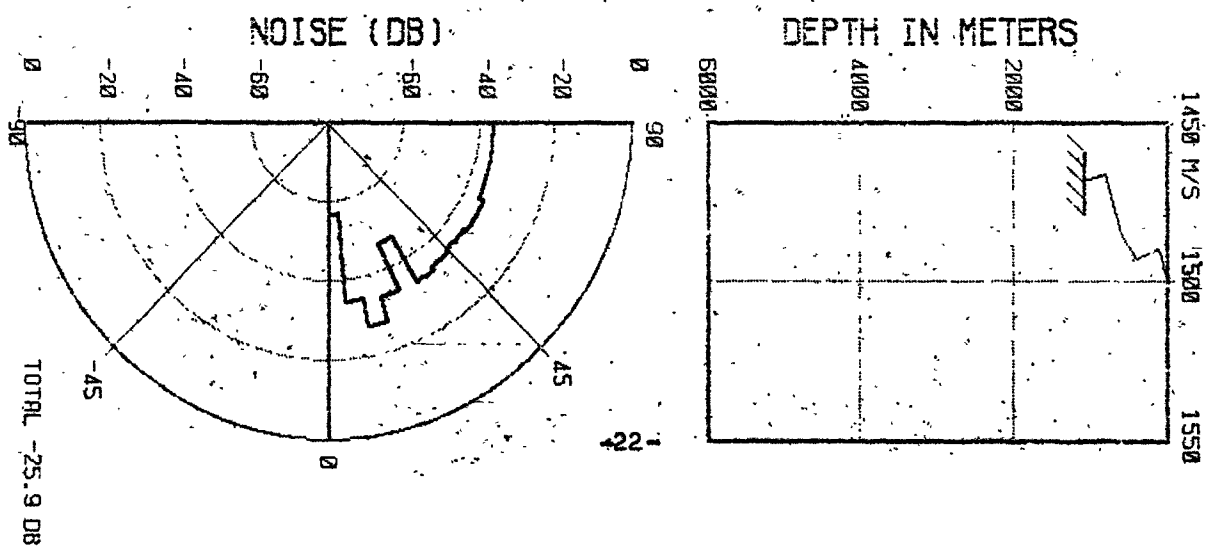
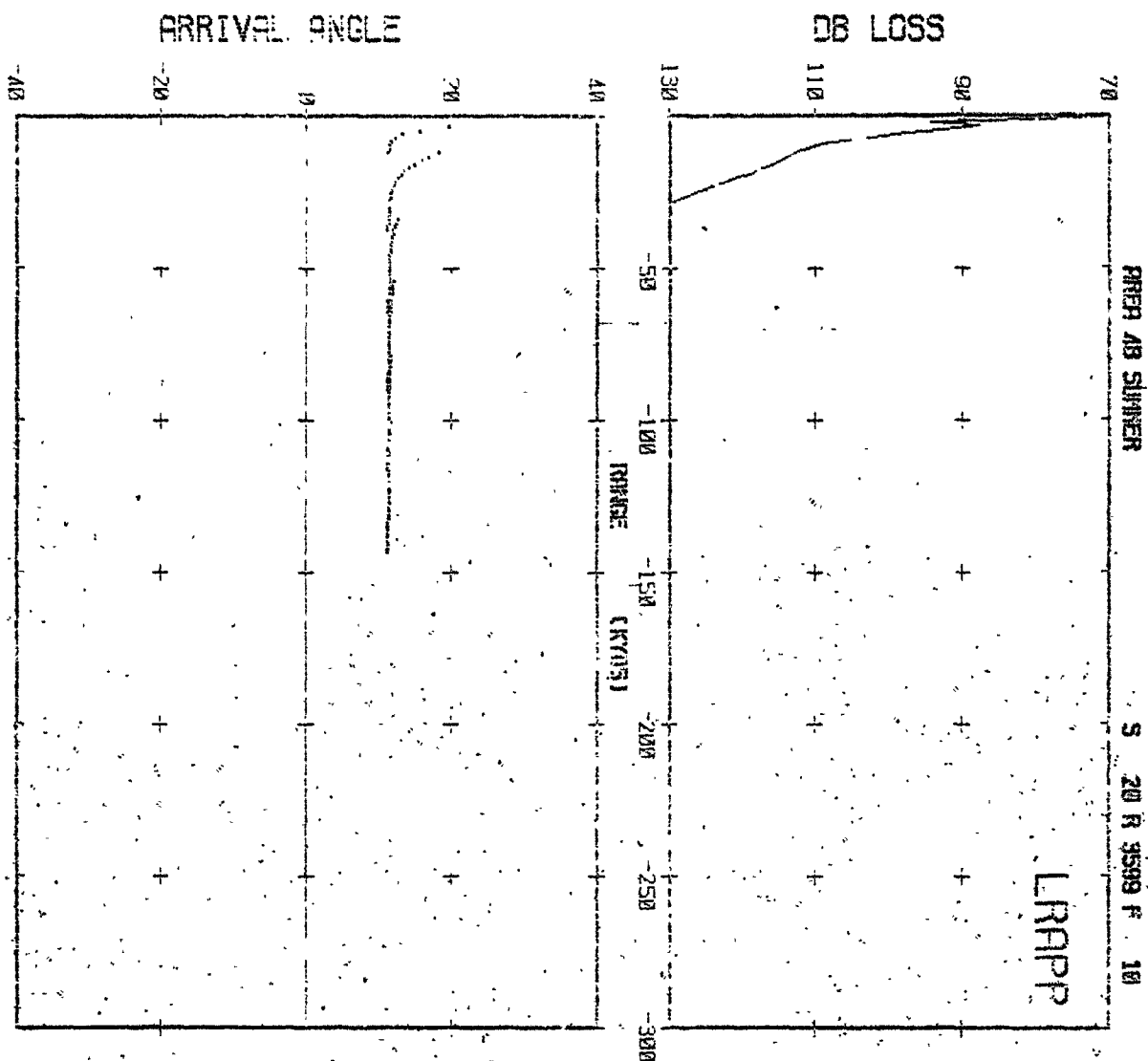


DEPTH IN METERS



NOISE (DB)



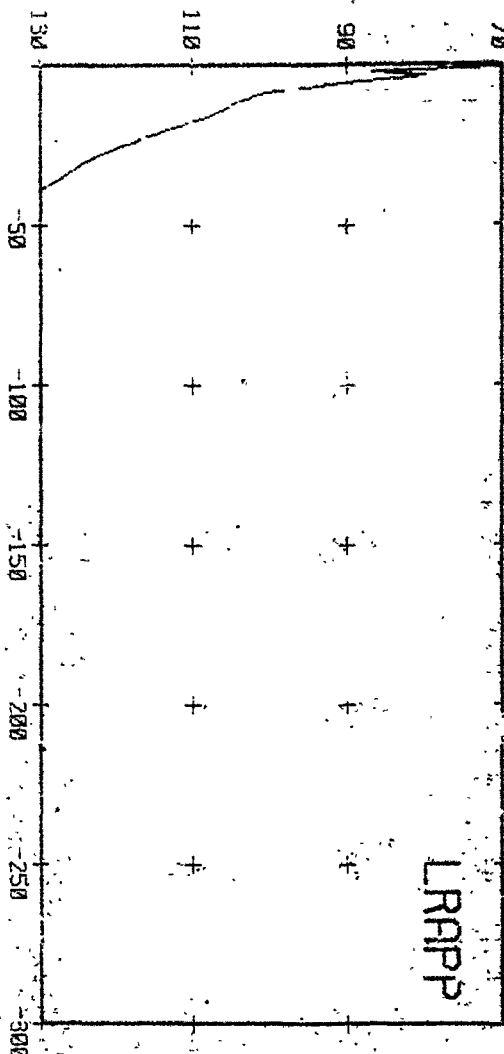


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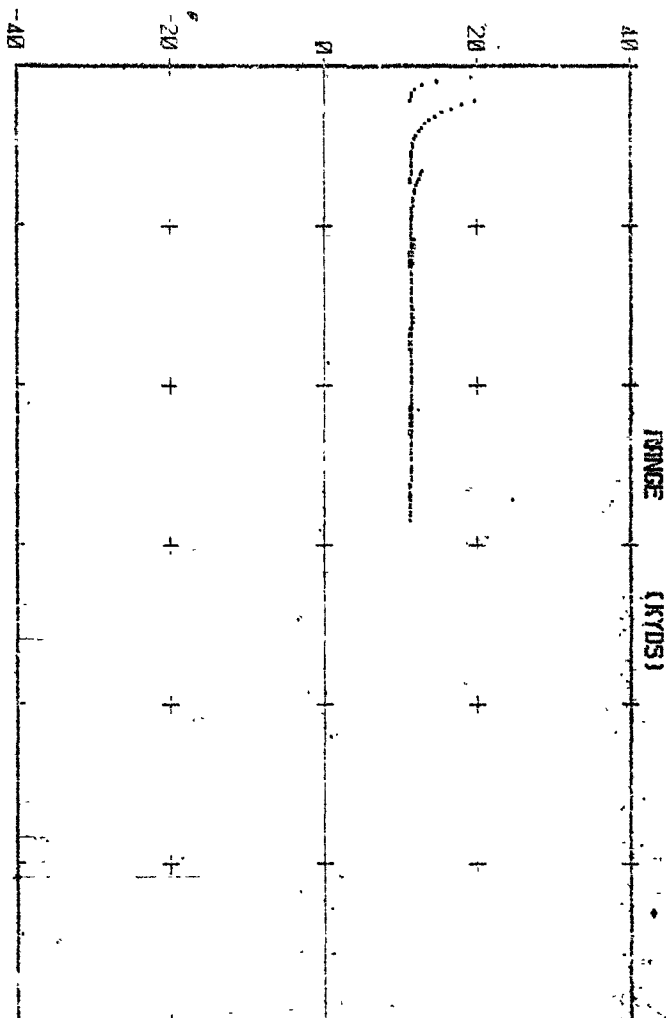
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LRAPP

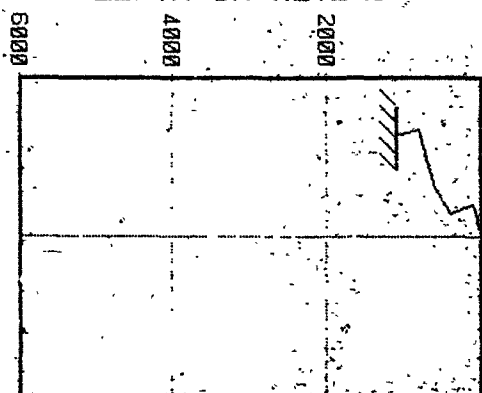
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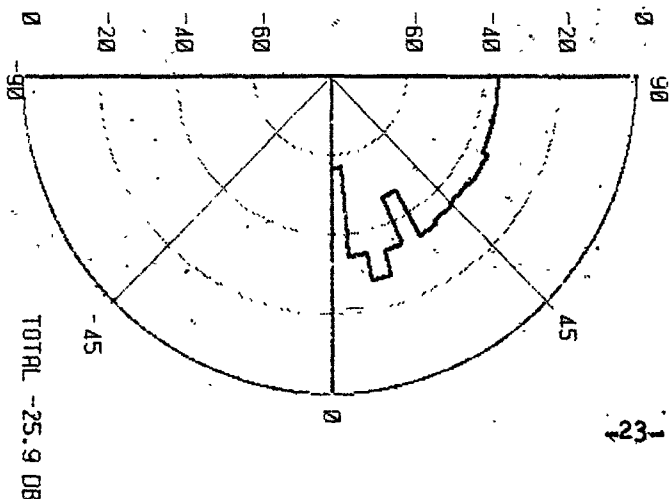
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

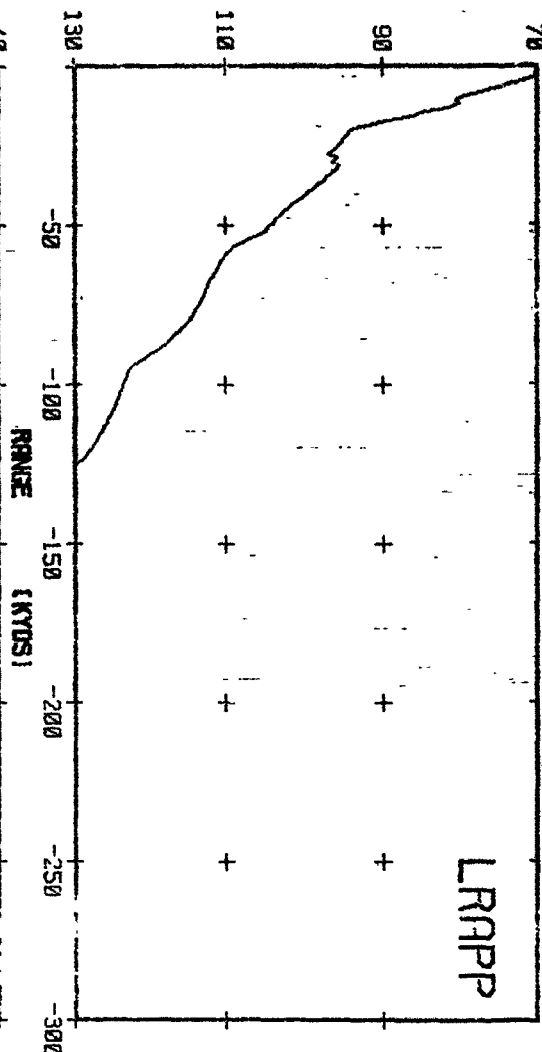


TOTAL -25.9 DB

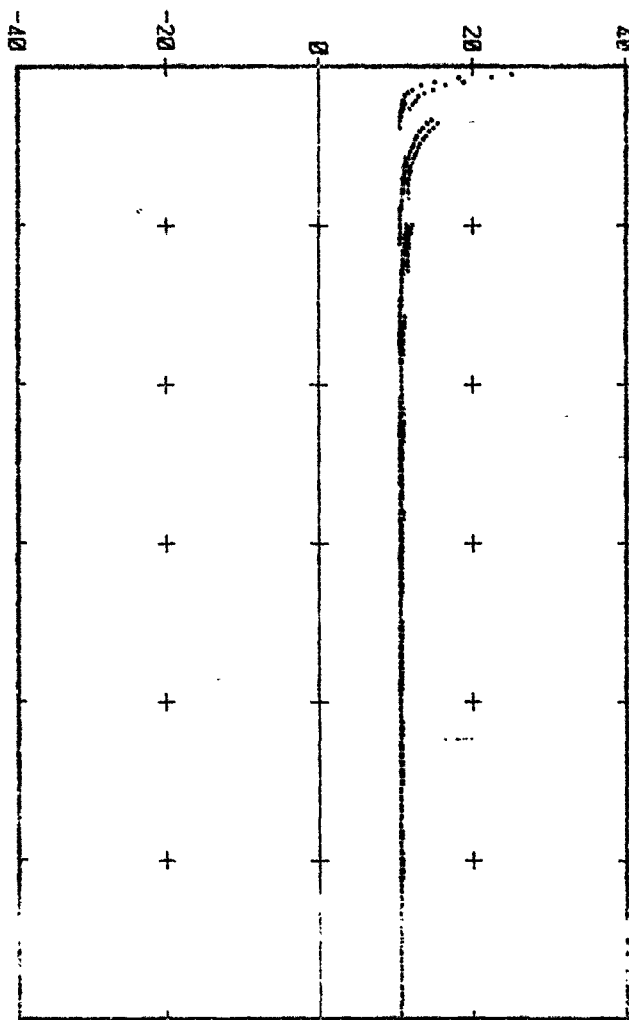
RIVER 43 SUMMER

S 288 R 5593 F 18

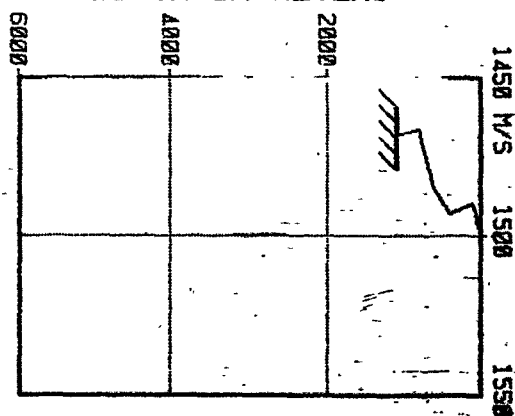
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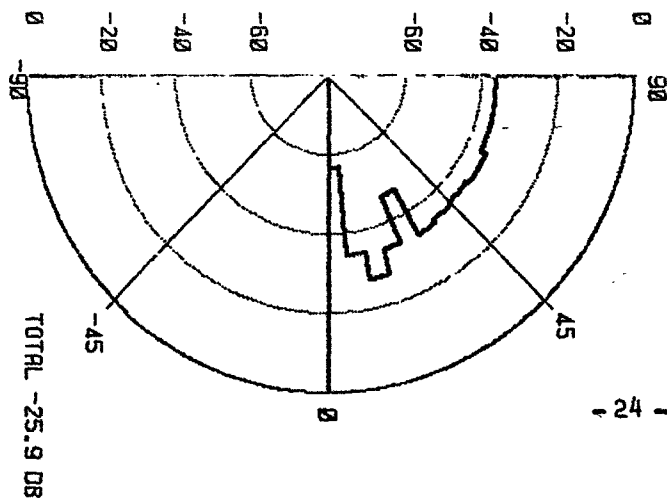
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



TOTAL -25.9 DB

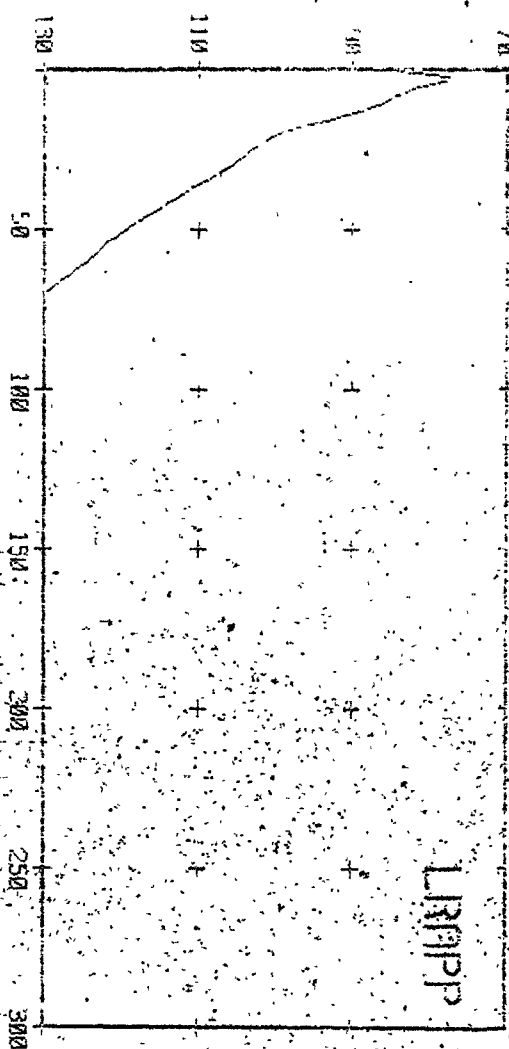
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AREA 40 SUMMER

S. 50 N 100 E 50

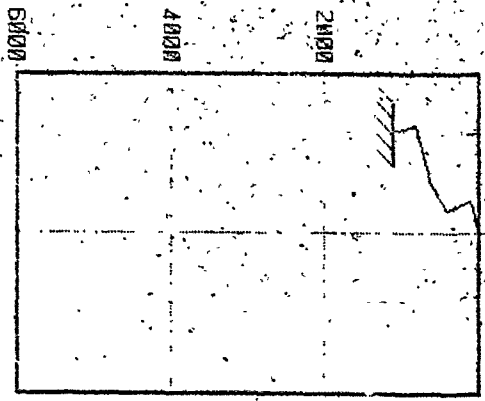
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DB LOSS

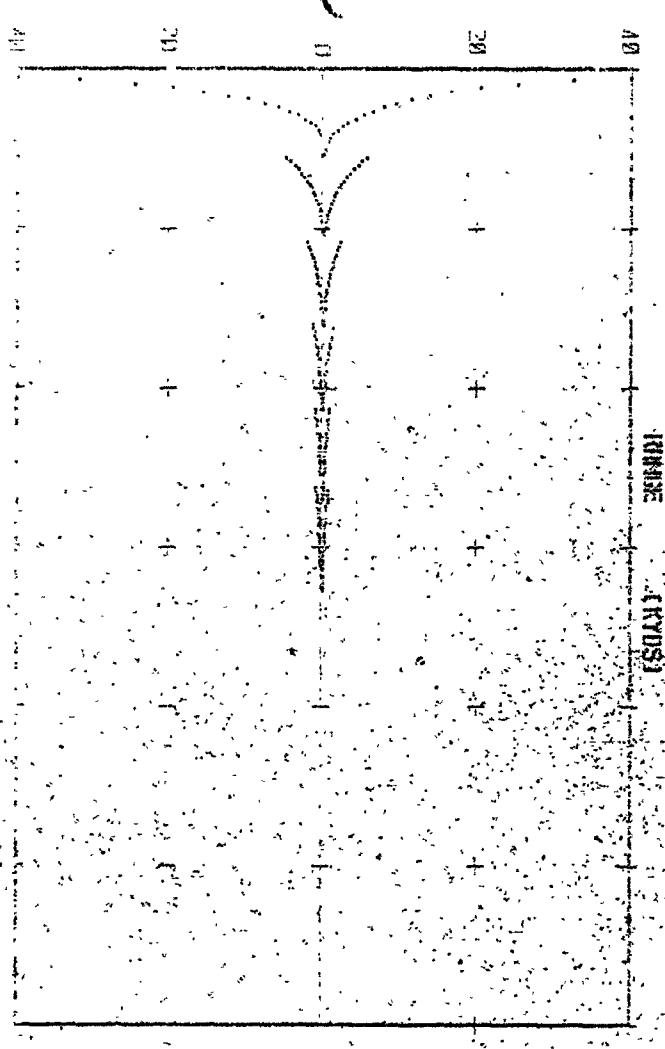


LRPP

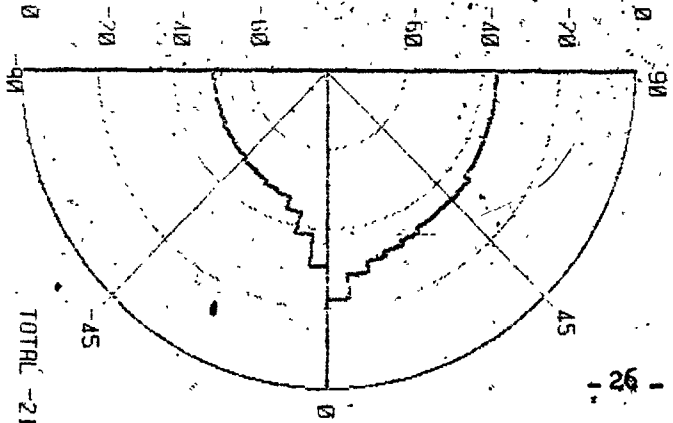
DEPTH IN METERS



CARVED ANGLE

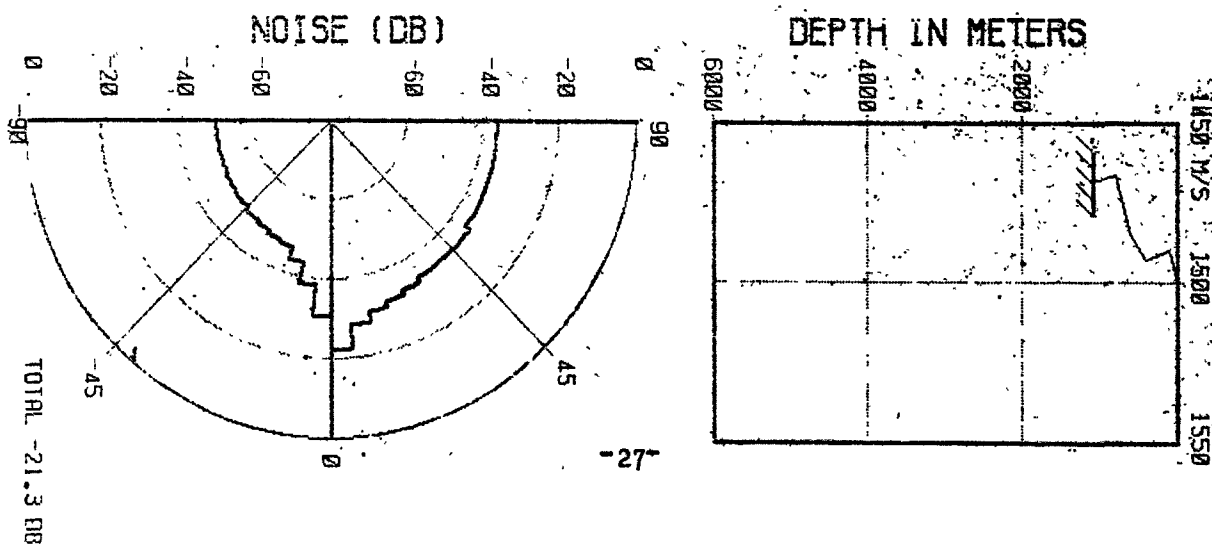
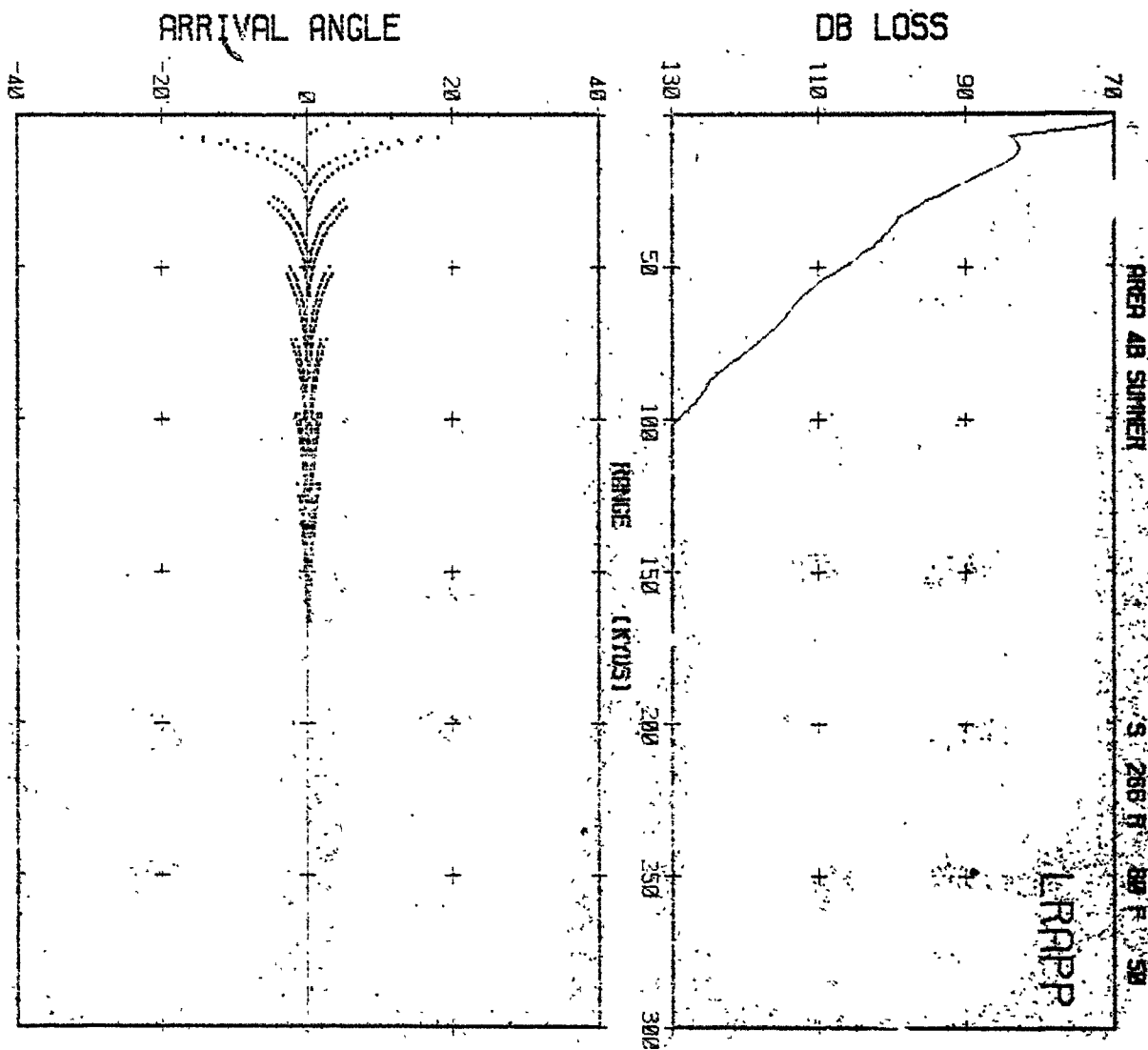


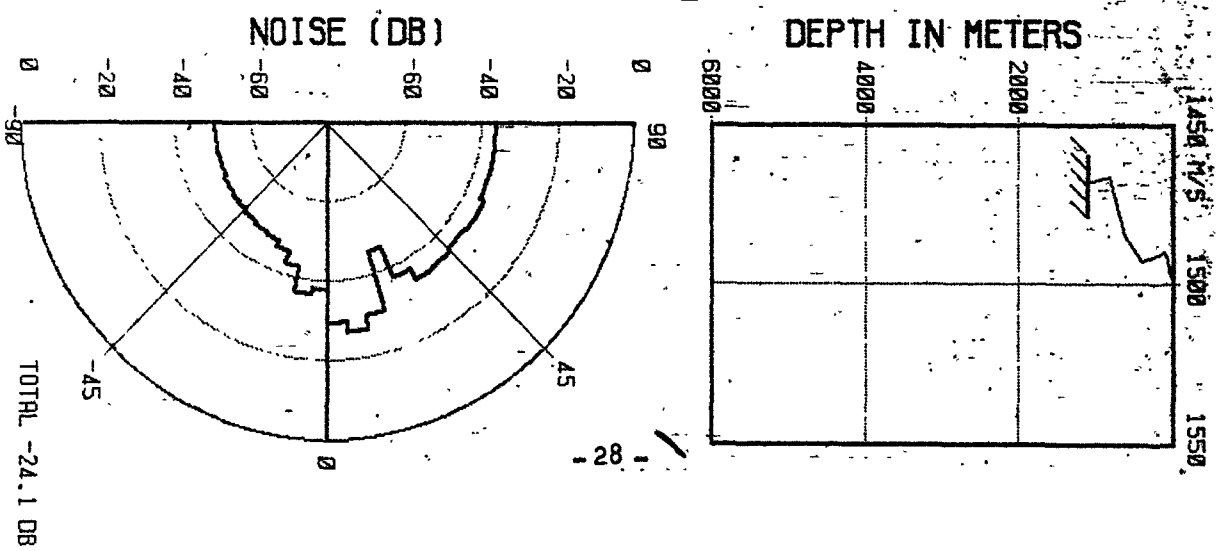
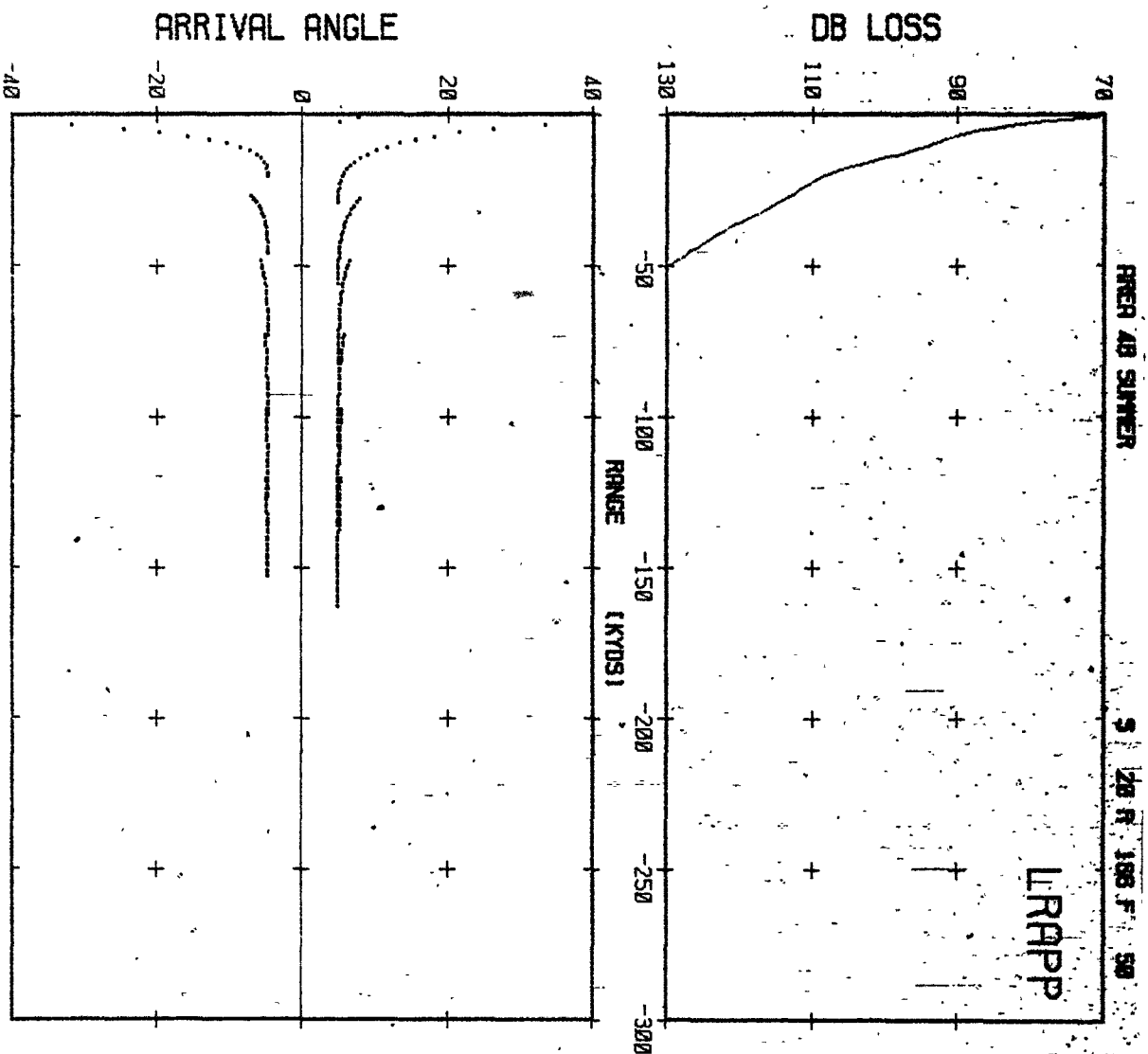
NOISE (DB)



TOTAL -21.3 DB

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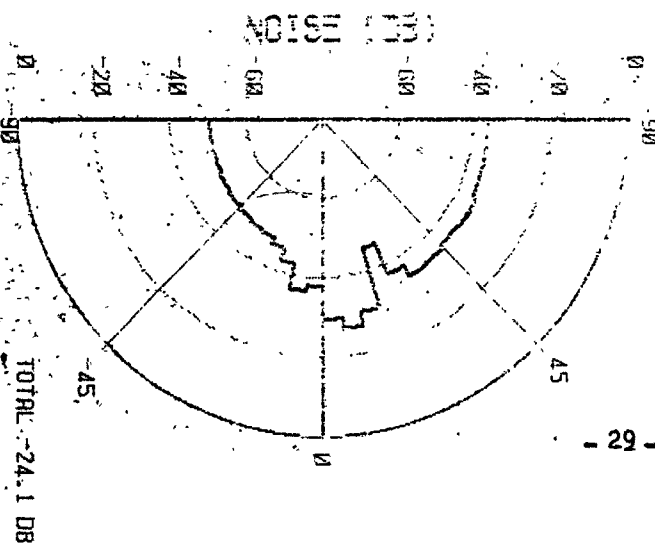
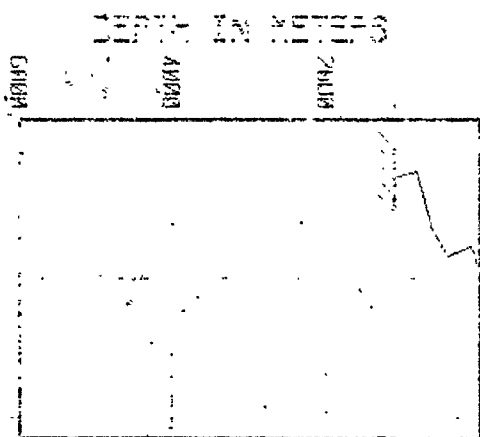
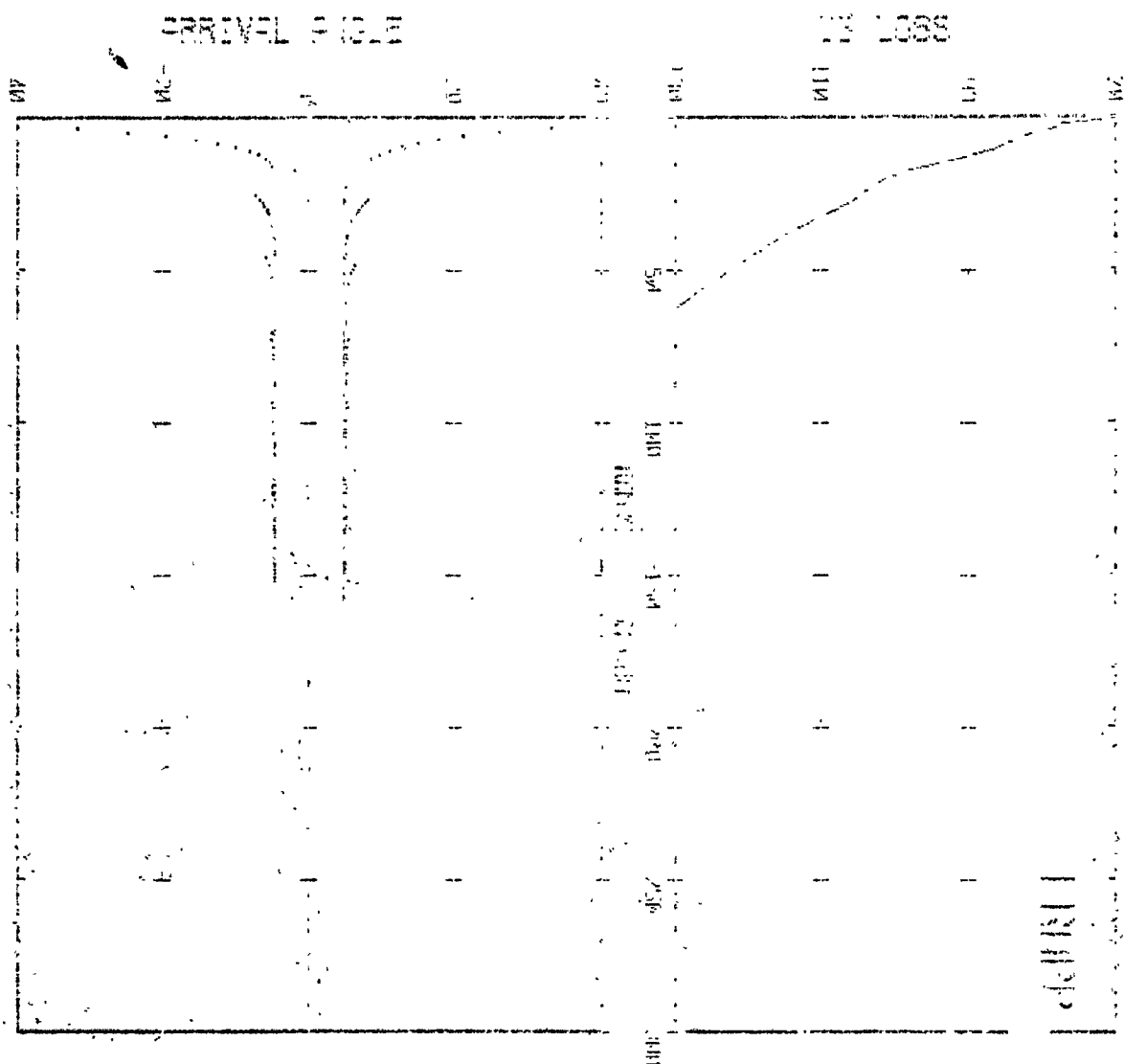




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0000 001 SUB 0000

1450 M/S 1500 1550



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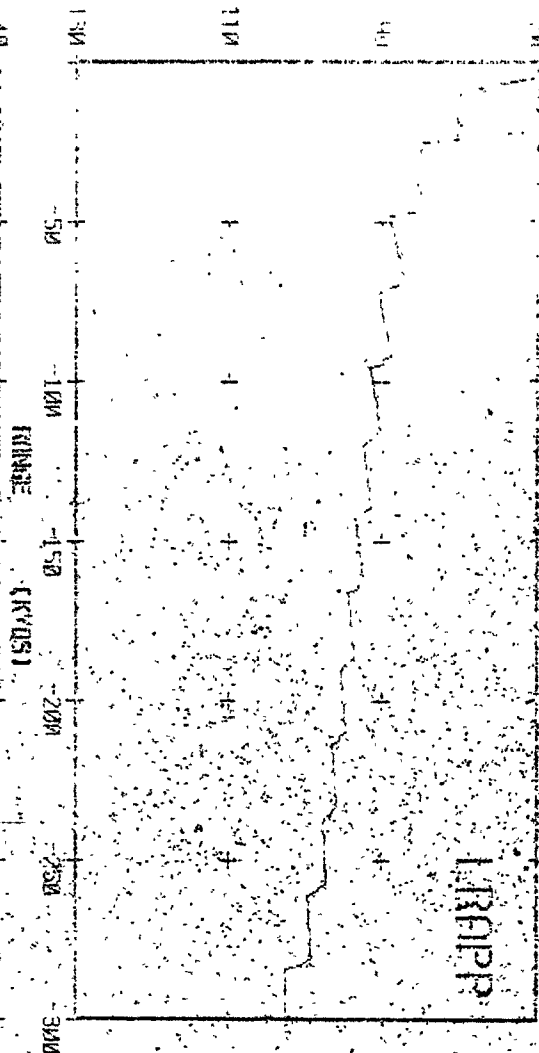
TOTAL -24.1 DB

03 1085

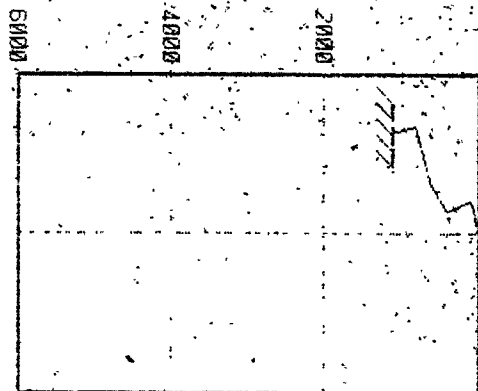
FRONT AIR SURFIER

S 286 ft 100 ft 50

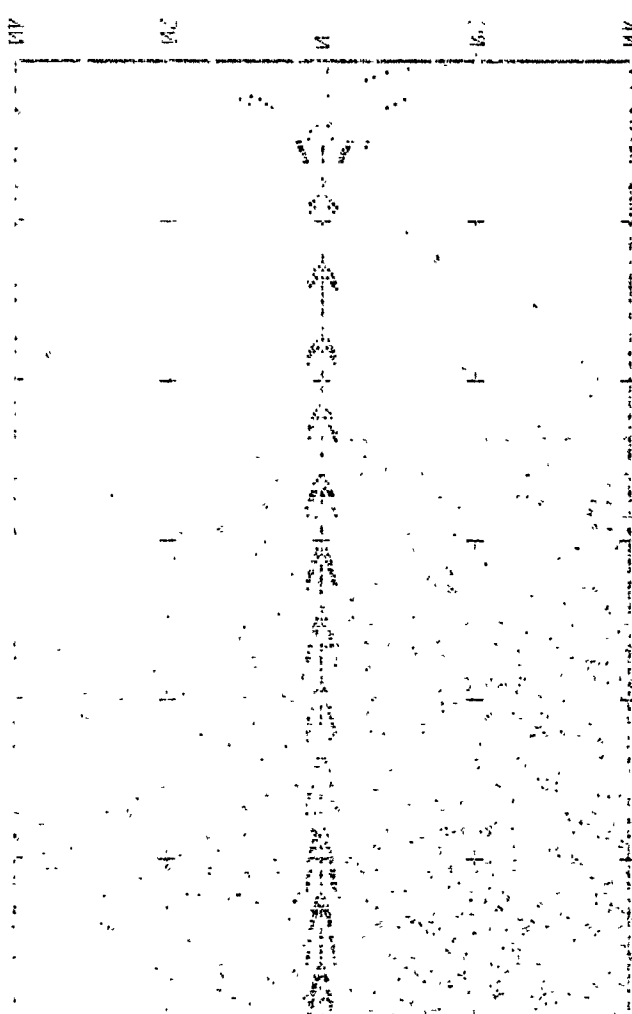
1450 M/S 1500 1550



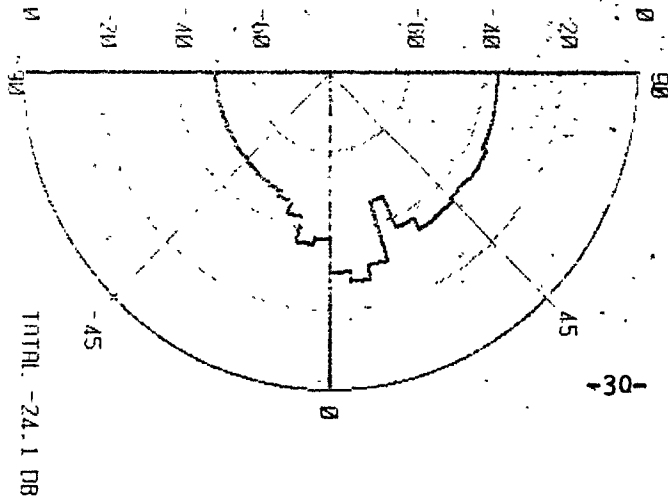
DEPTH IN METERS



ORIGINAL SCALE



NOISE (DB)

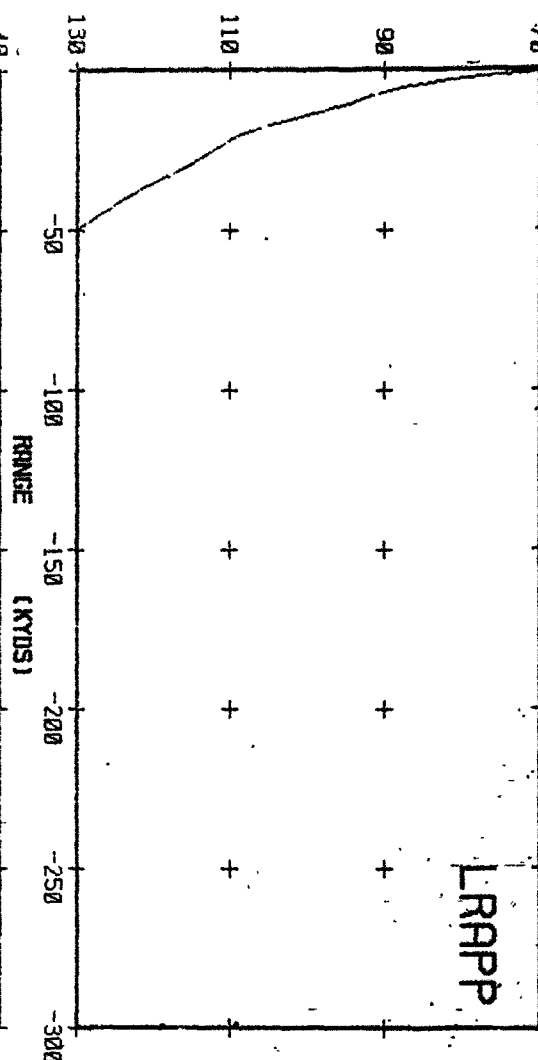


AREA 4B SUMMER

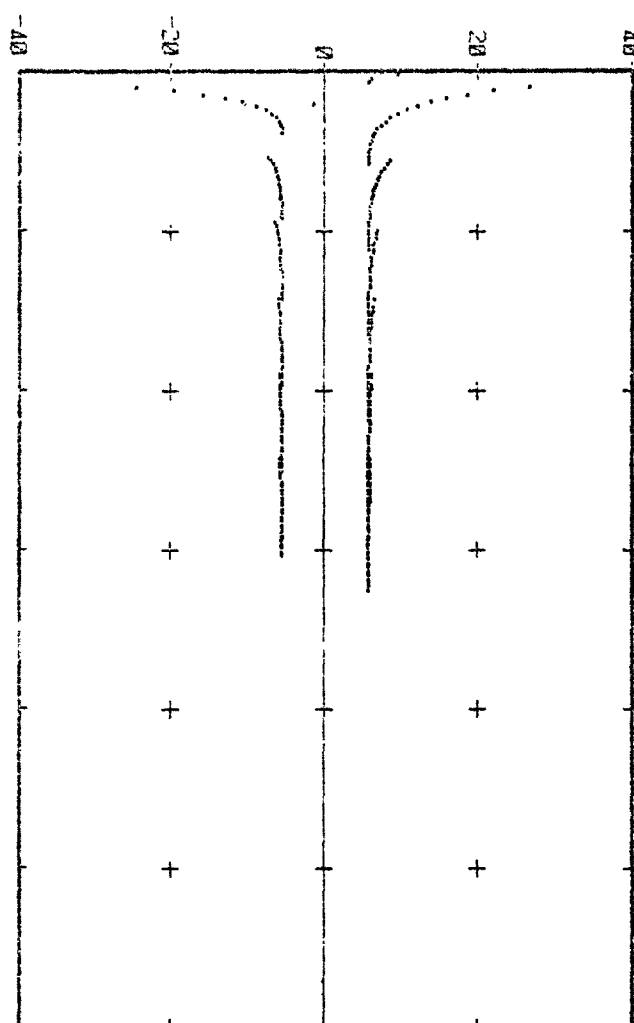
S 20 R 300 F 50

1450 M/S 1500 1550

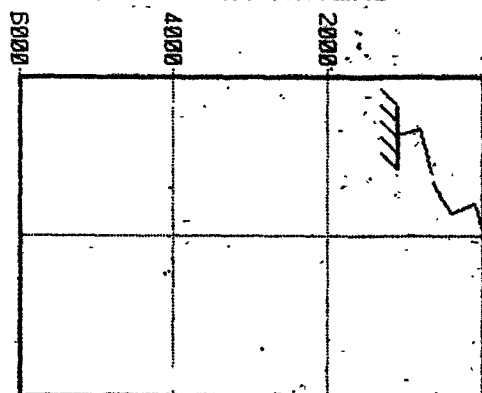
DB LOSS



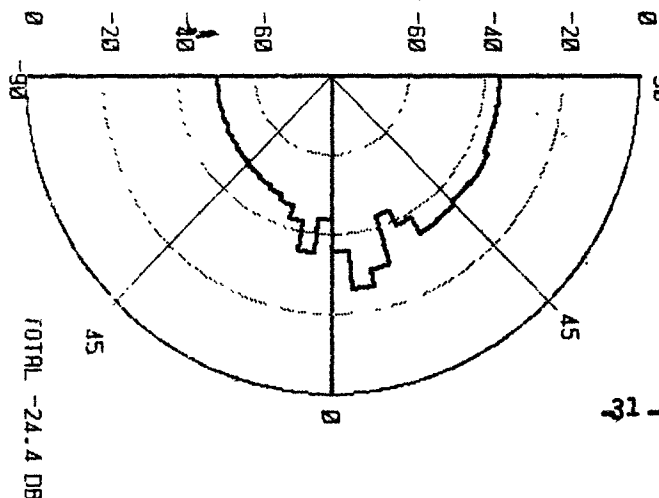
ARRIVAL ANGLE

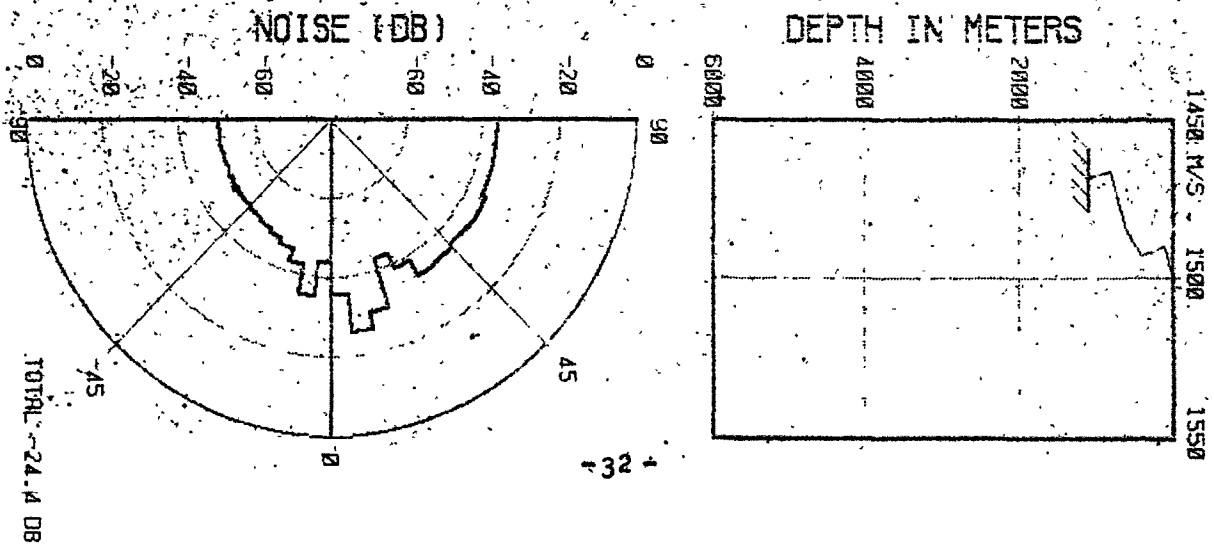
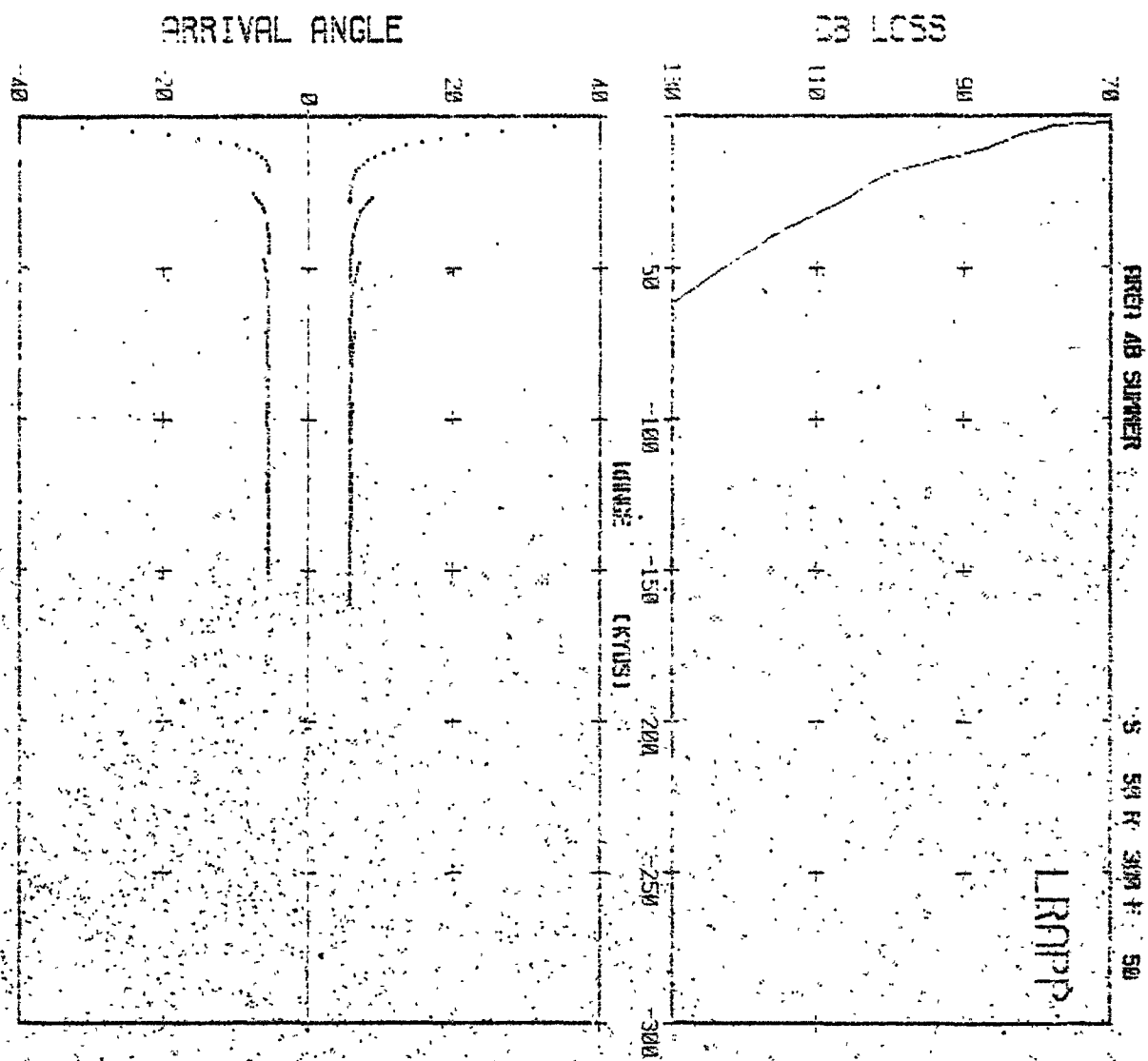


DEPTH IN METERS



NOISE (DB)



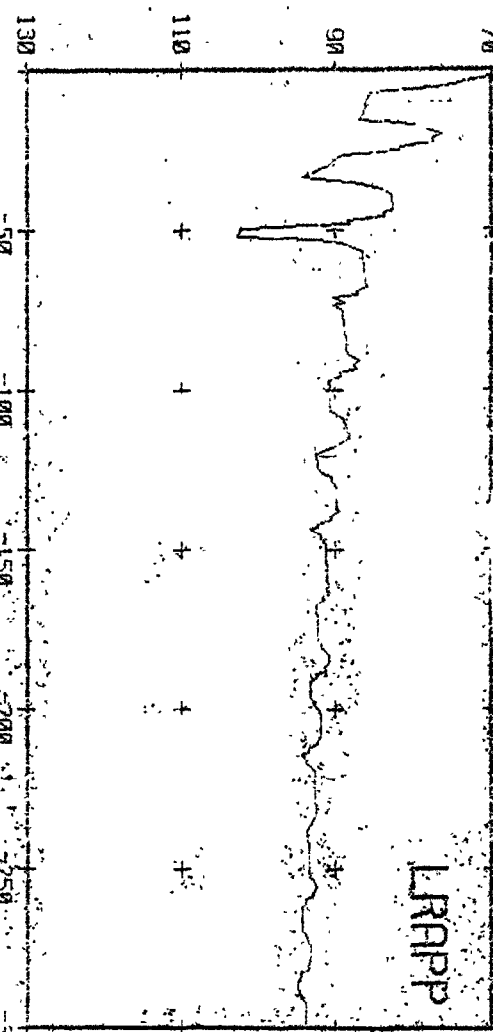


AREA AB SUMMER

3. 250 F. 300 F. 50

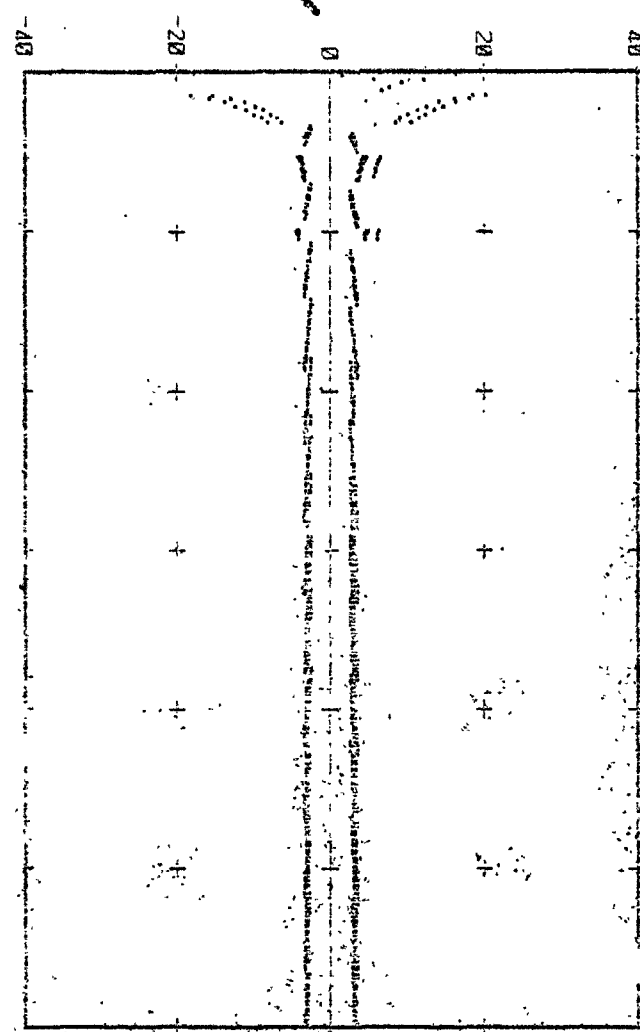
1450 H/S 1500 1550

DB LOSS

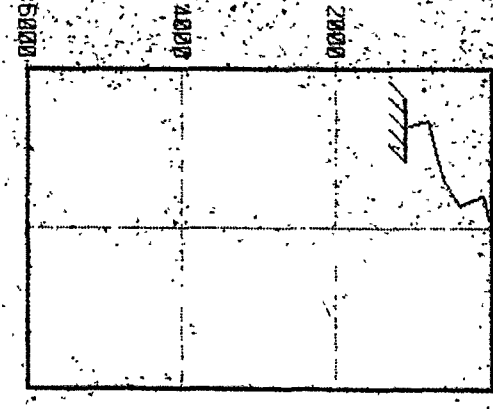


RANGE (KMS)

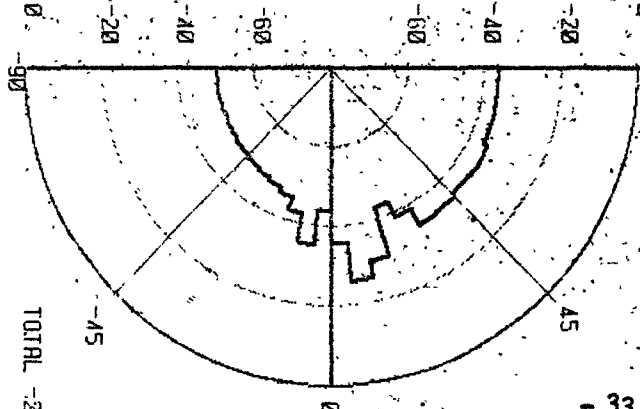
ARRIVAL ANGLE



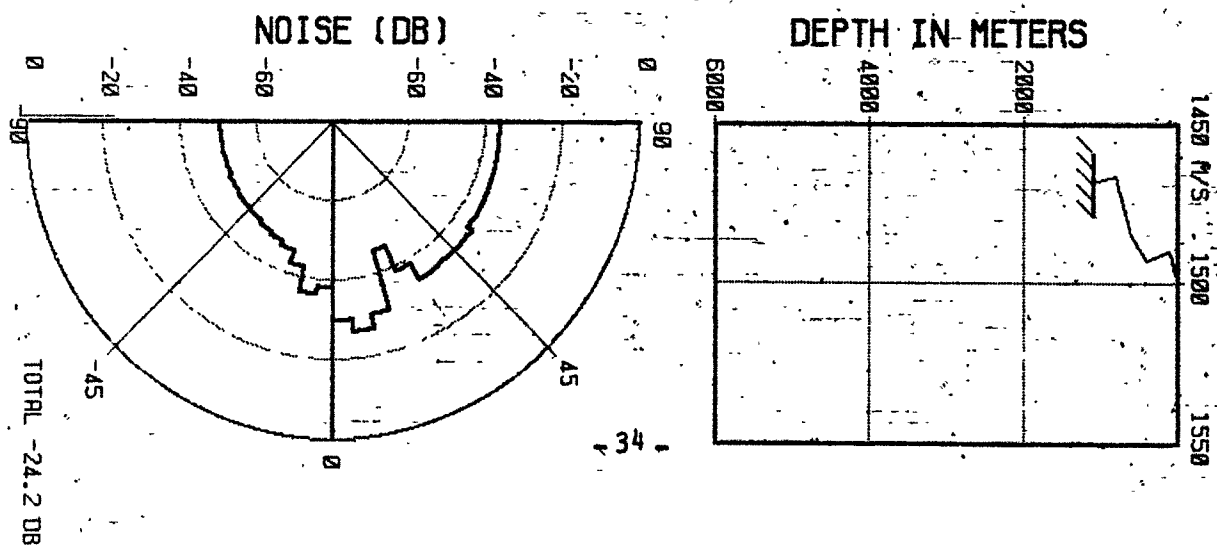
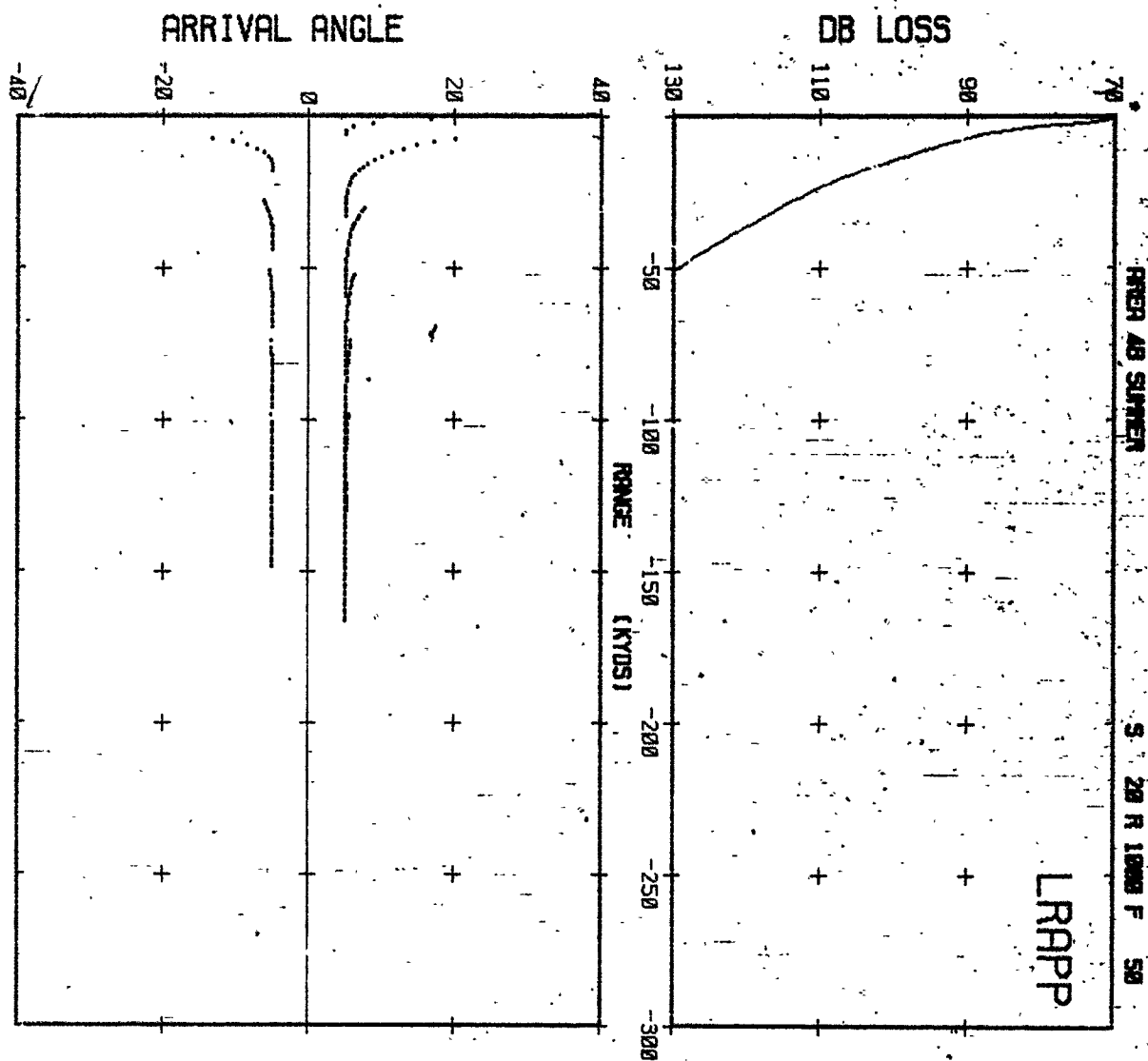
DEPTH IN METERS



NOISE (DB)



TOTAL -24.4 DB

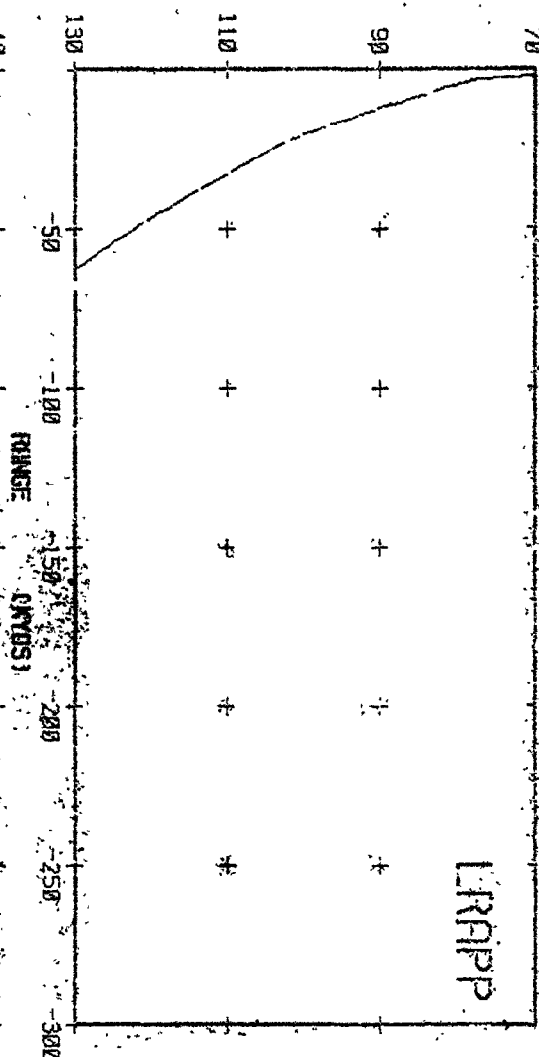


GREEN AB SIGHTER

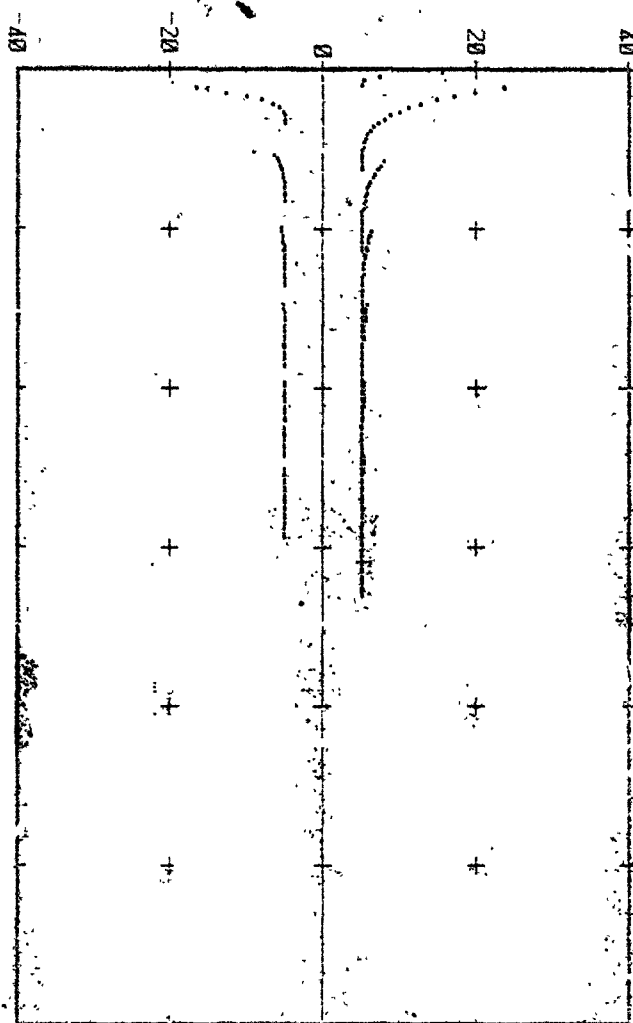
S. 50° R. 1000 F. 50

1450 M/S 1500 1550

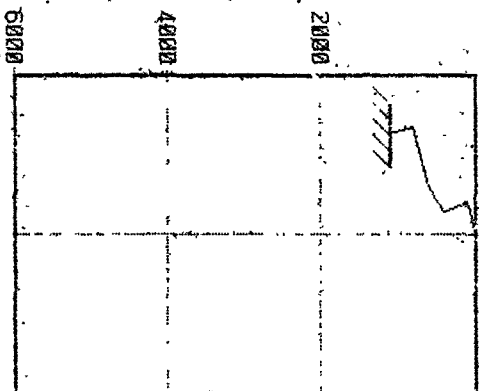
DB LOSS



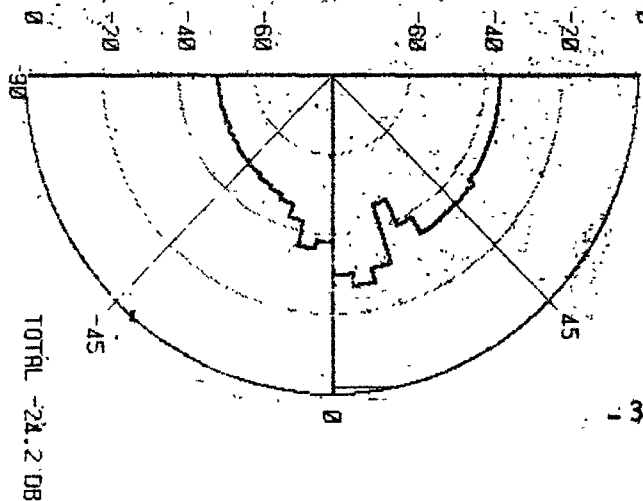
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)





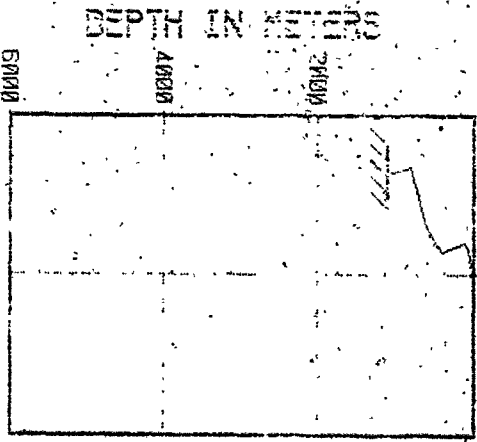
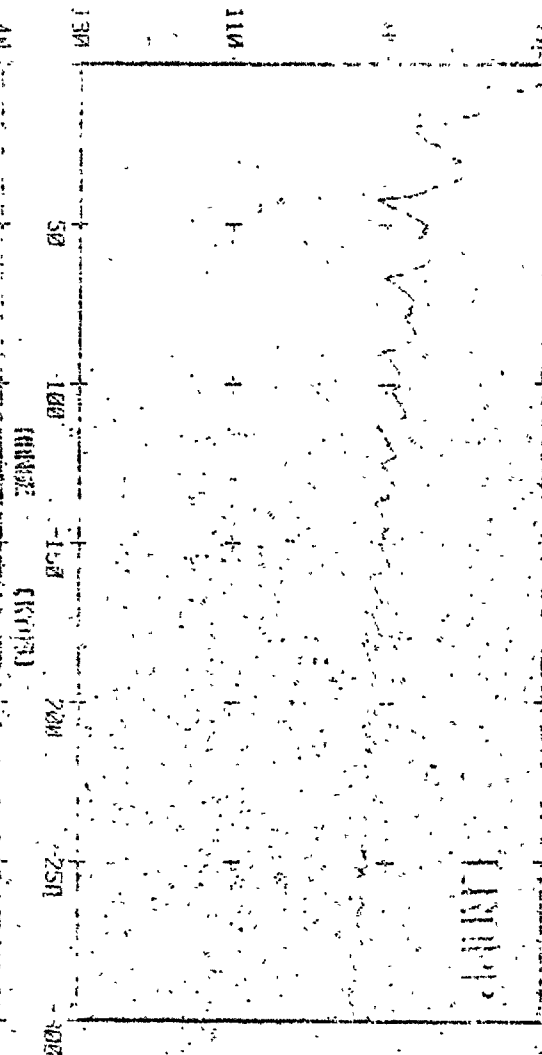
FROM AIR SURFAC

260 P. 1400 P. 50

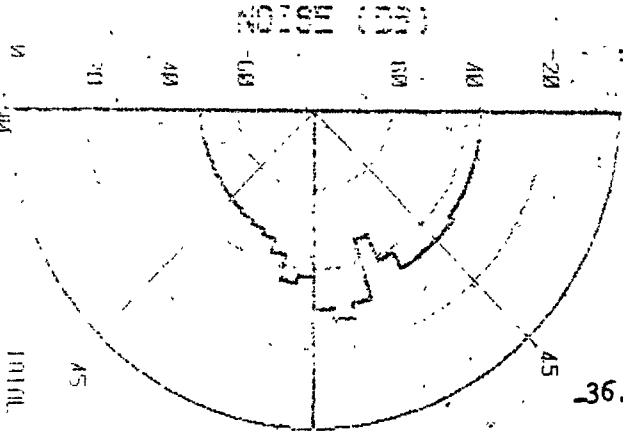
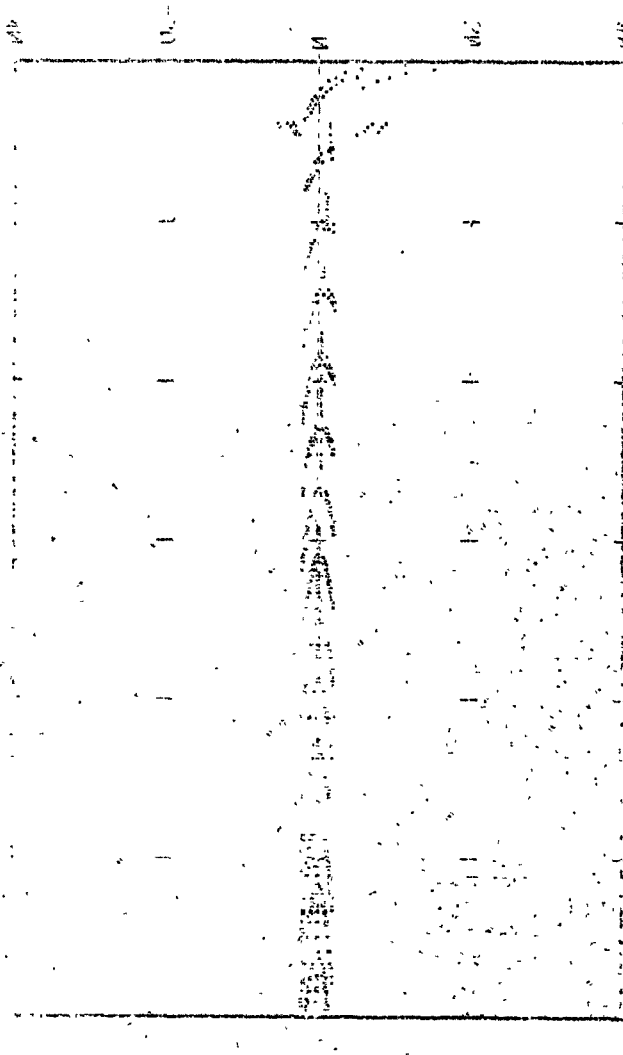
1450 M/S 1500

1550

0301 1000



0301 1000



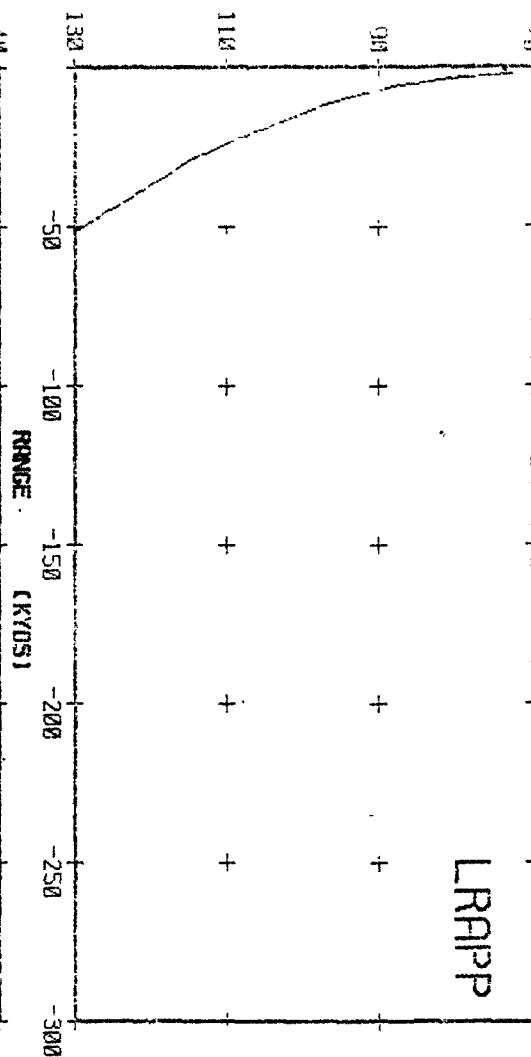
-36-

FREN AIR SURFEN

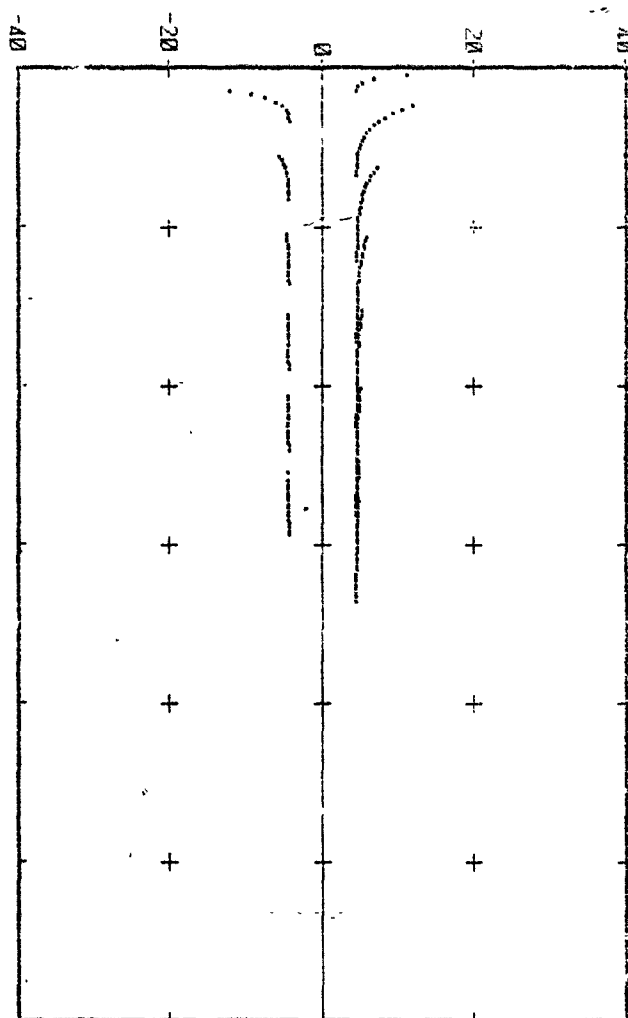
S 20 R 1312 F 50

1450 M/S 1500 1550

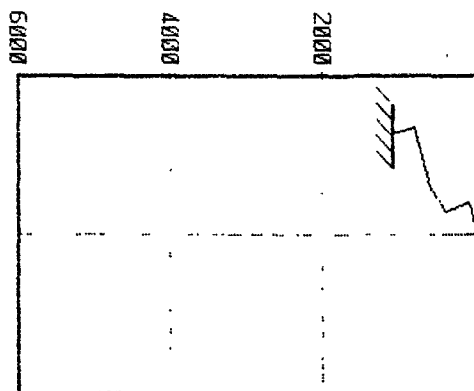
DB LOSS



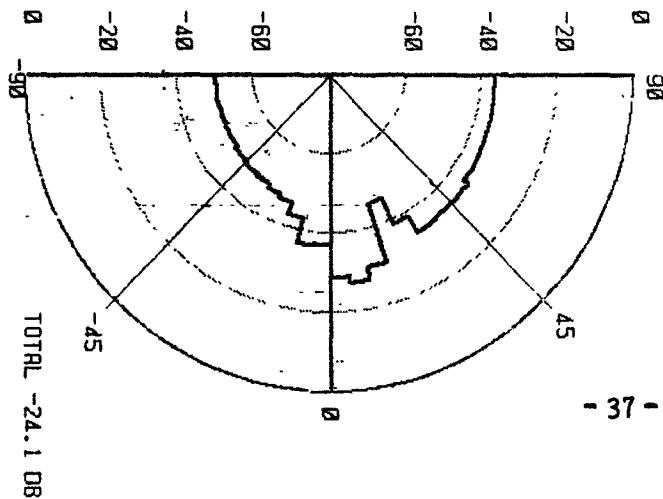
ARRIVAL ANGLE

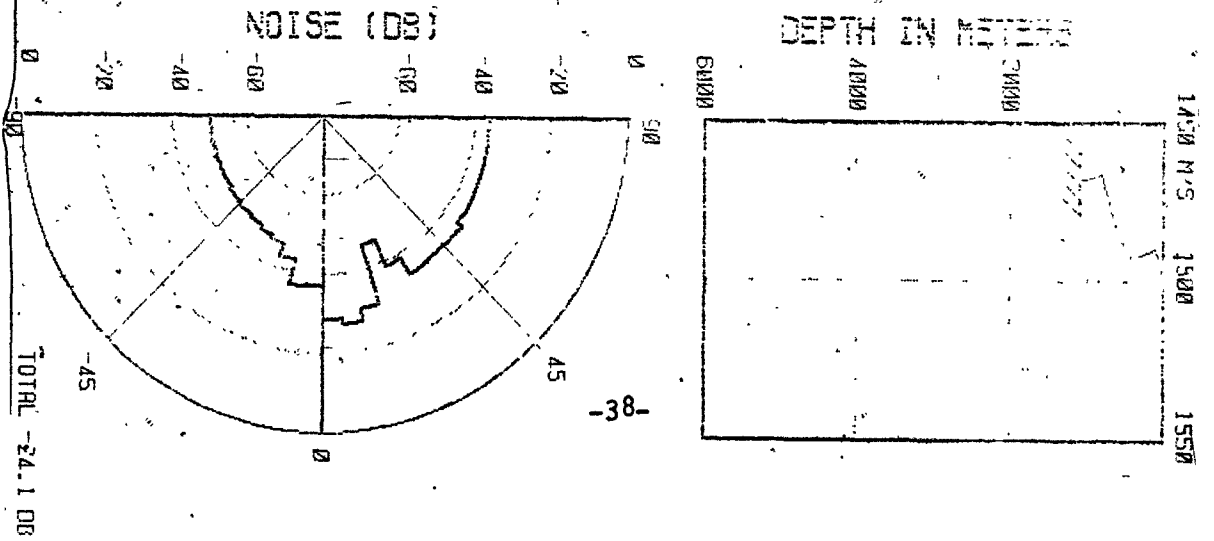
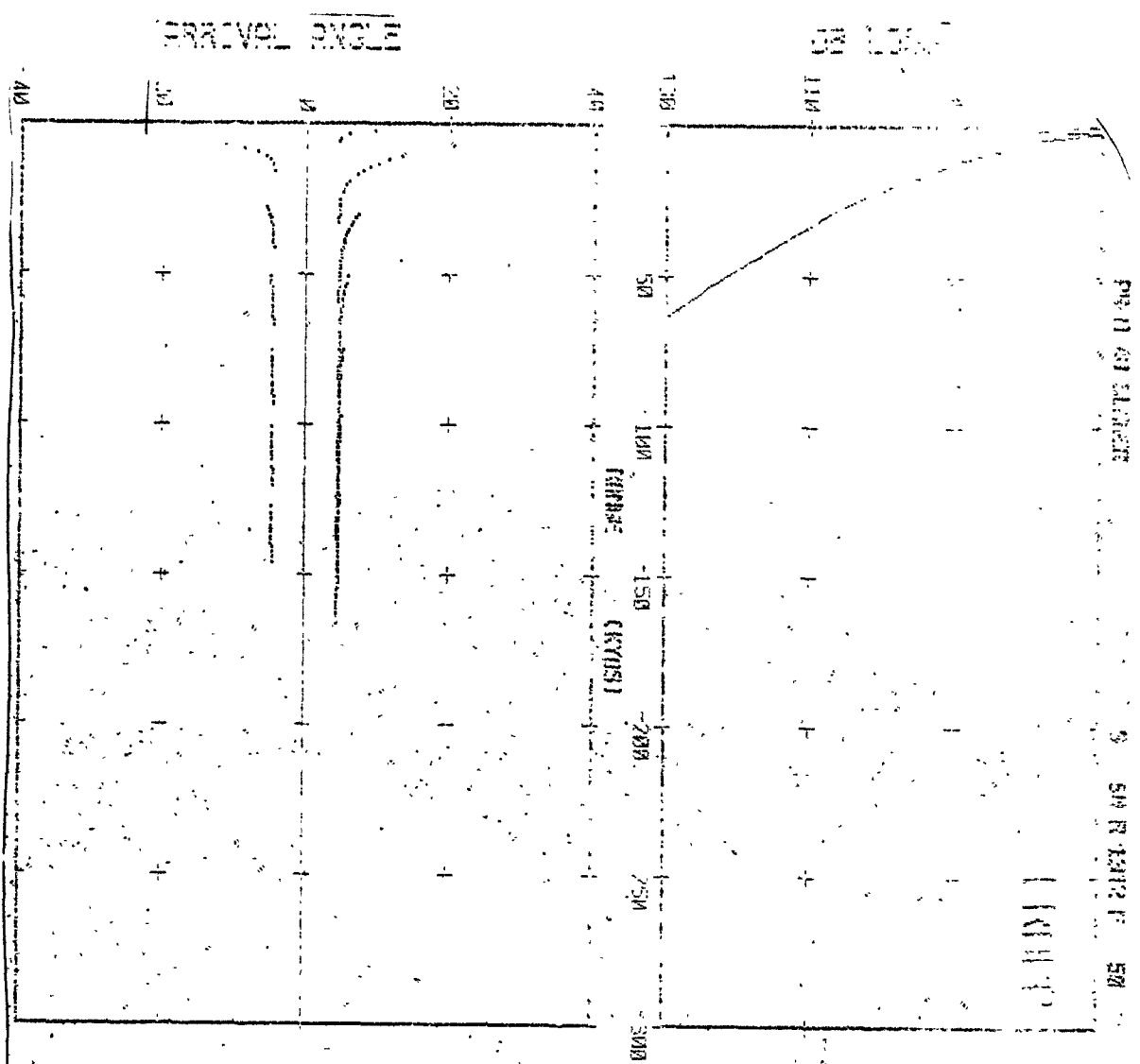


DEPTH IN METERS



NOISE (DB)



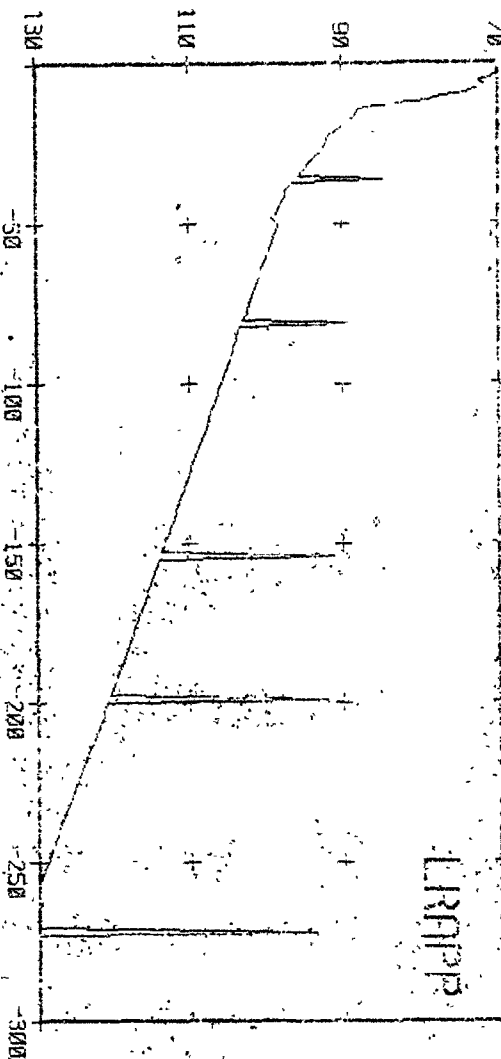


INNER AB SURFEN

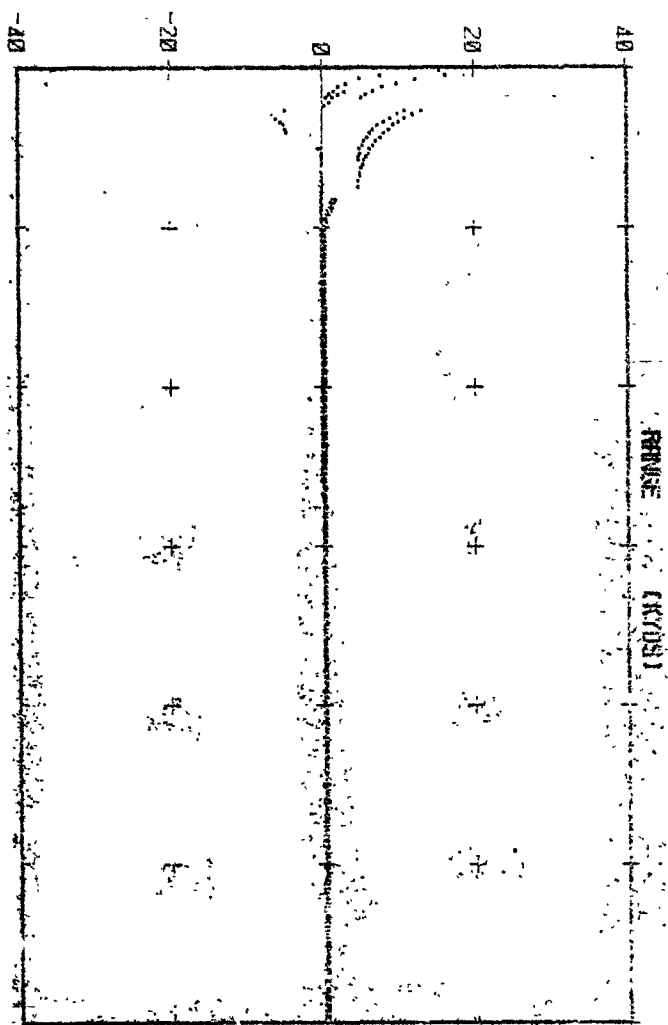
200 N. 132 1° 30'

1450 145 1500 1550

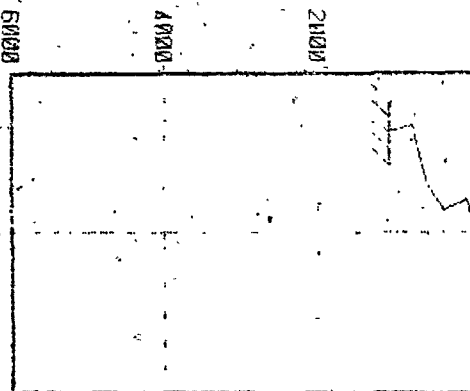
DB LOSS



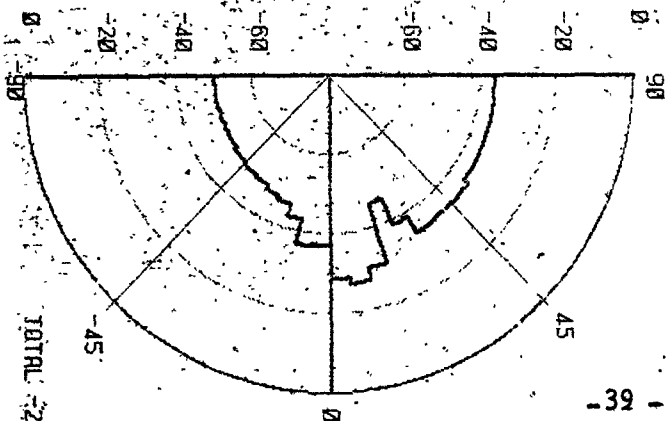
ARRIVAL ANGLE

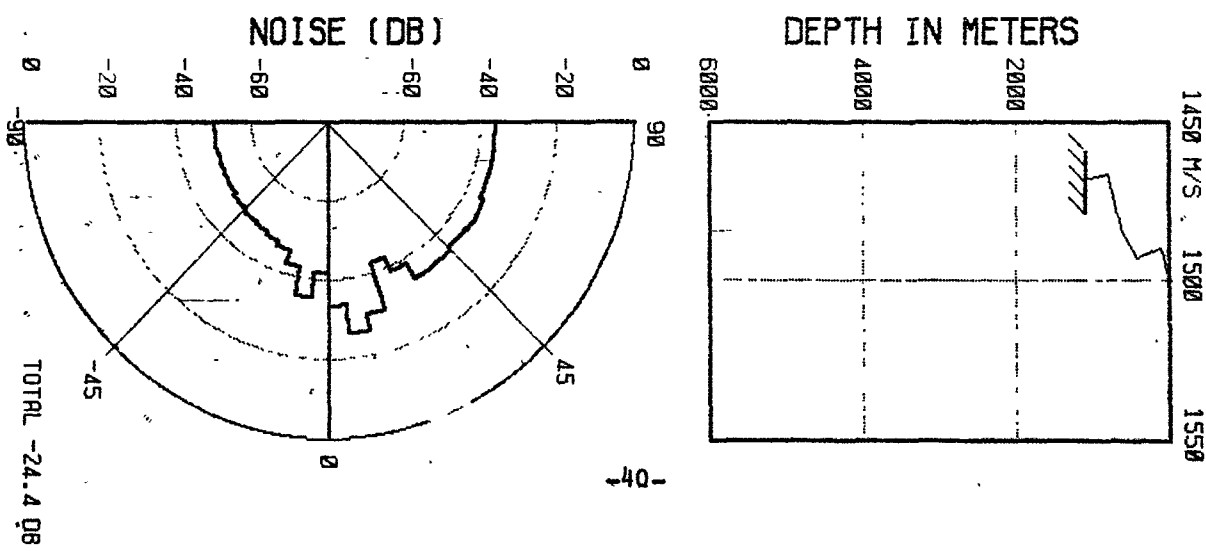
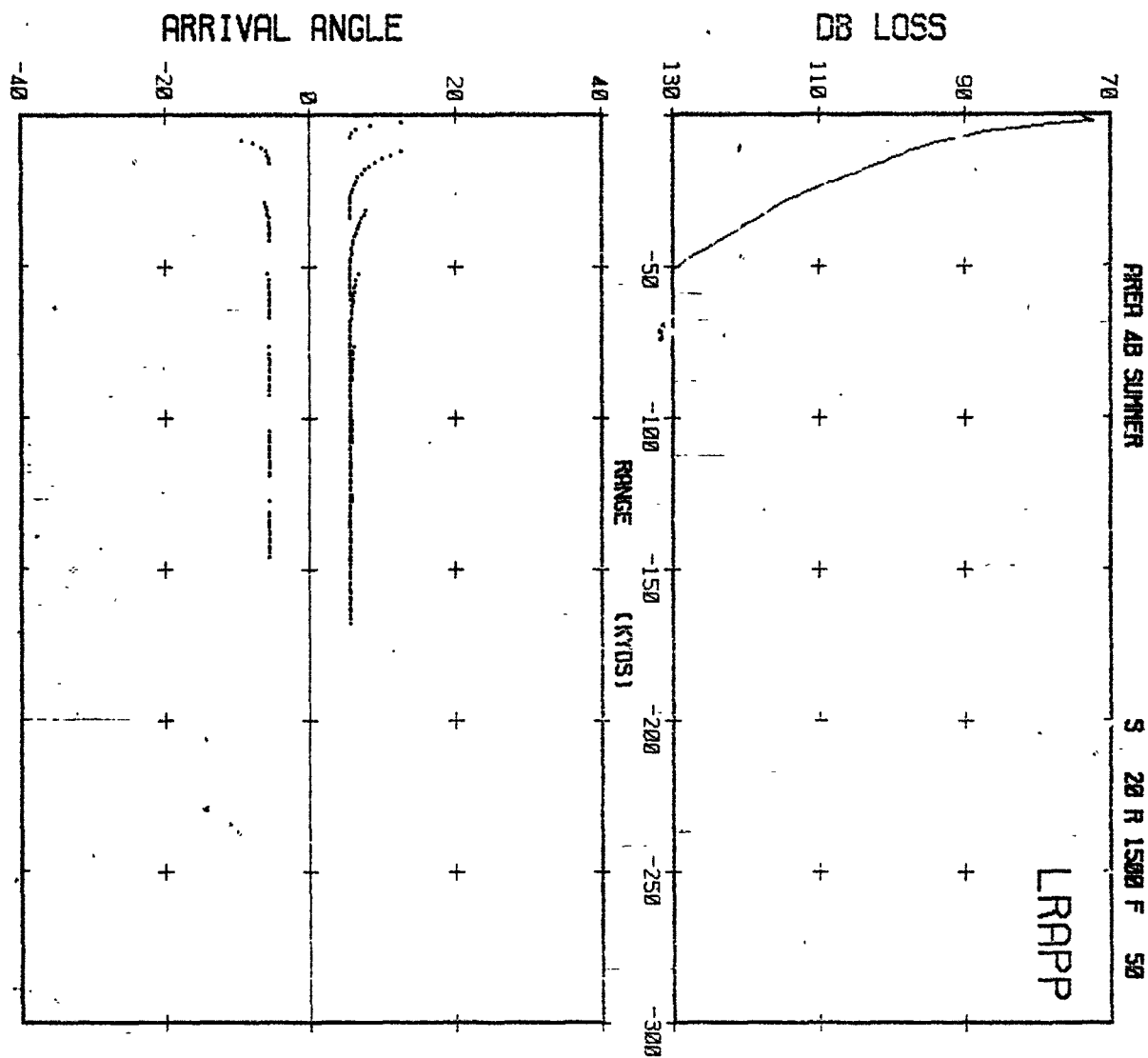


DEPTH IN METERS

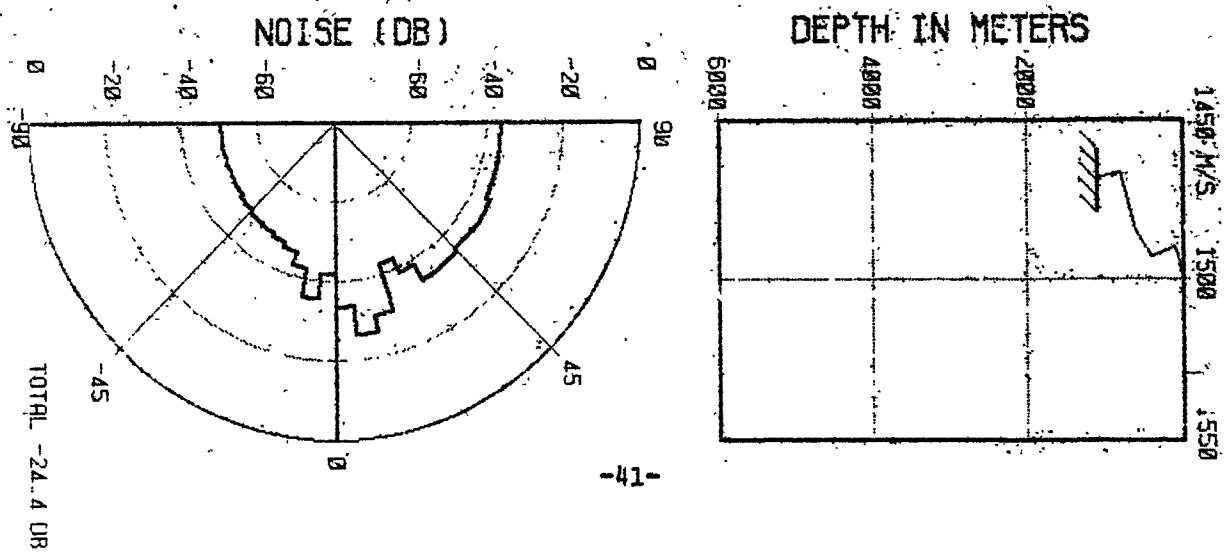
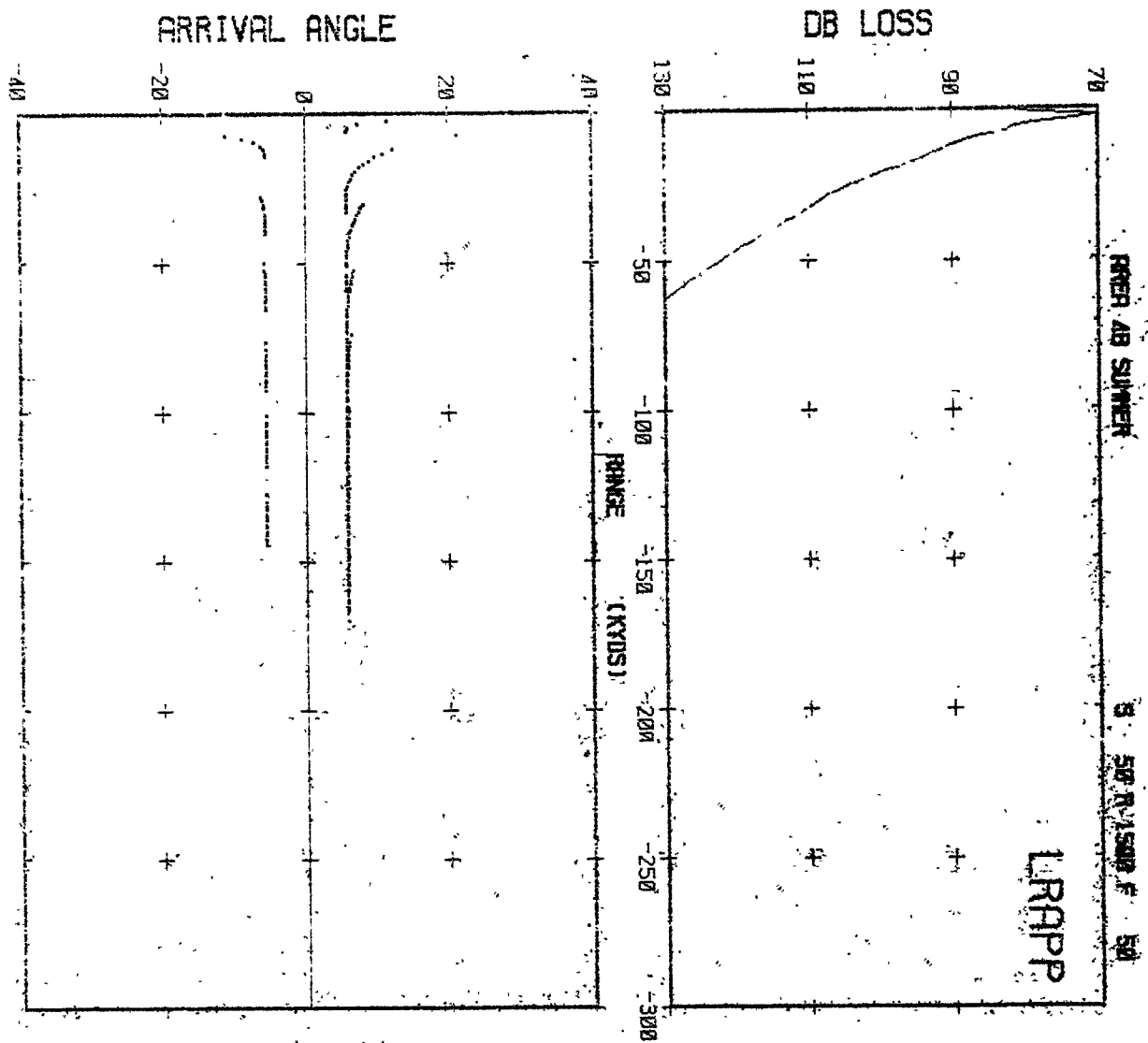


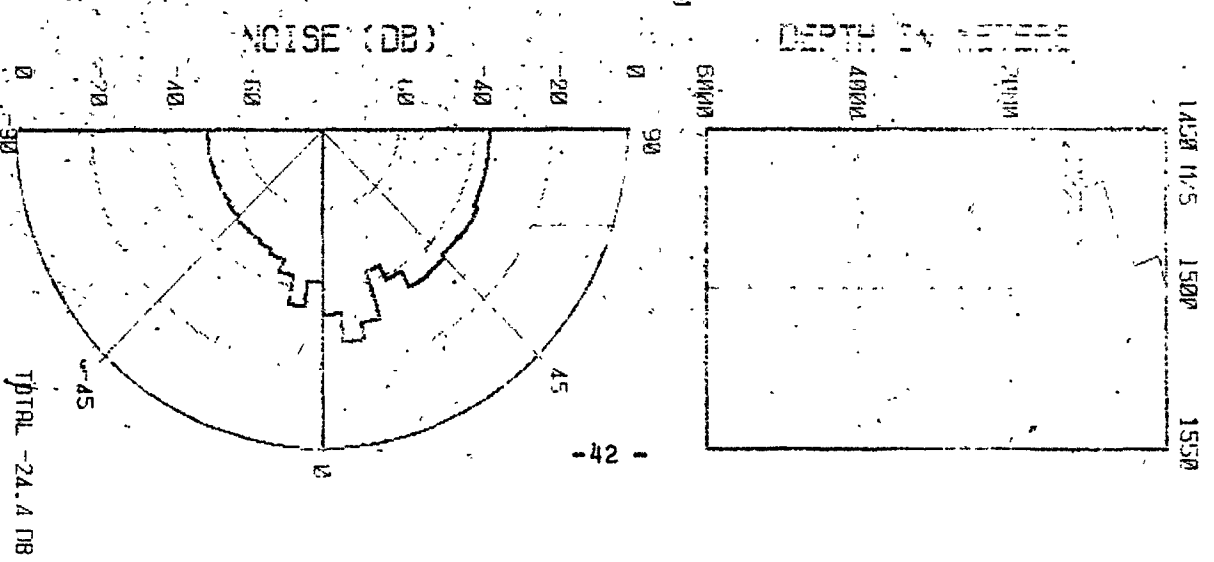
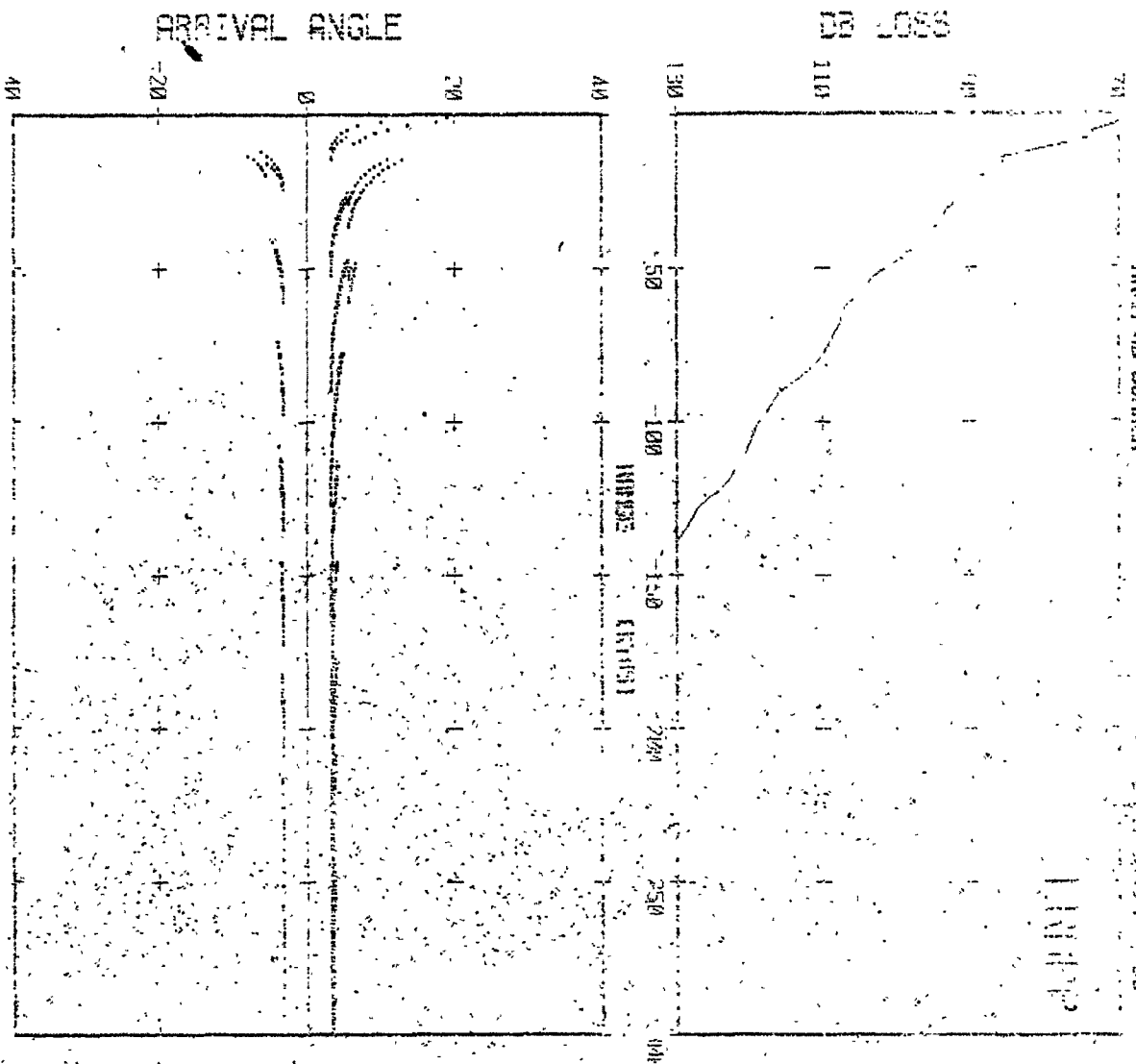
NOISE (DB)

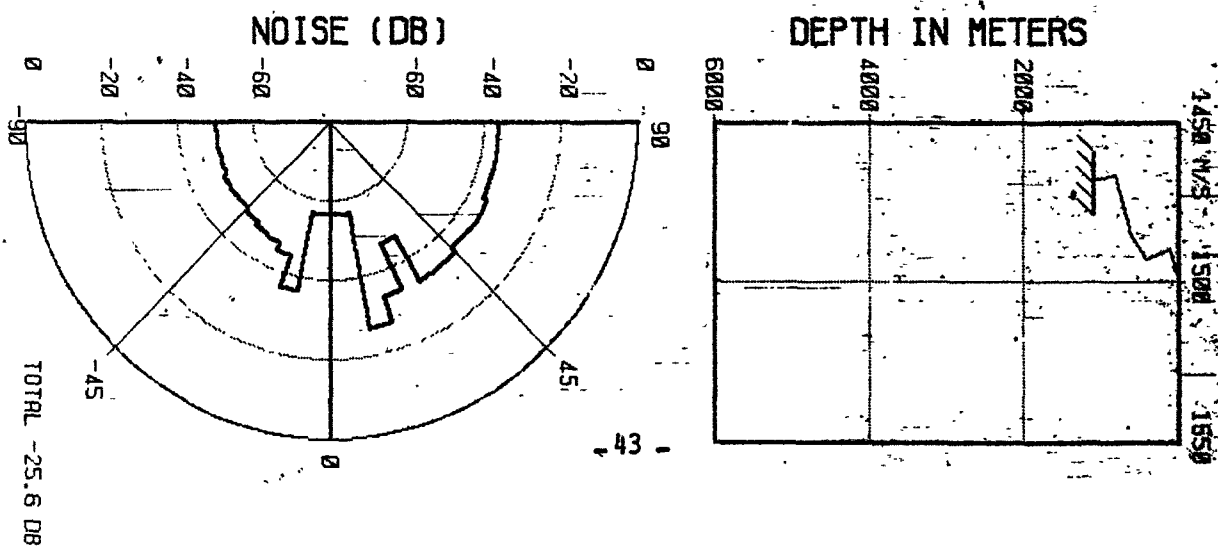
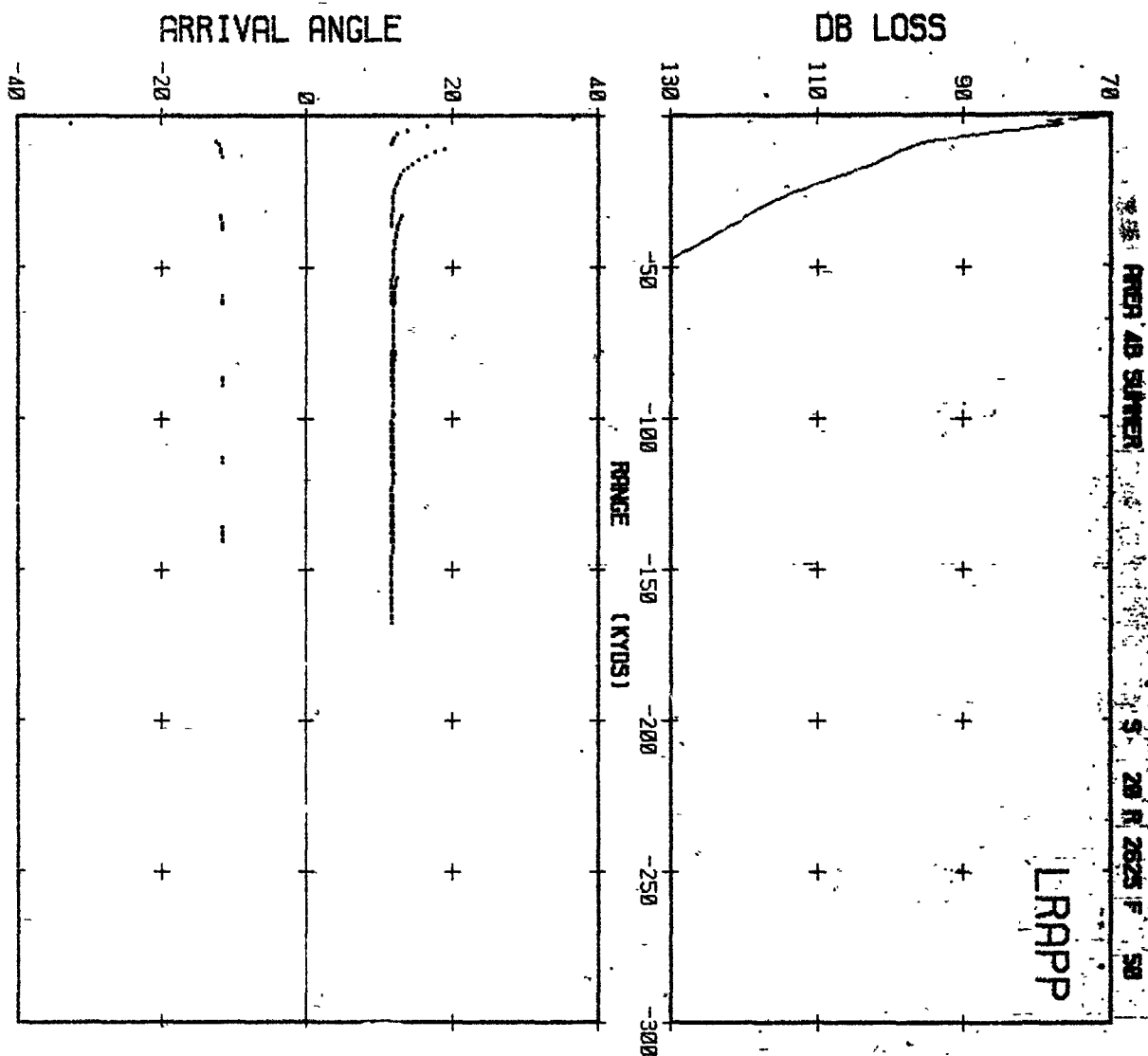




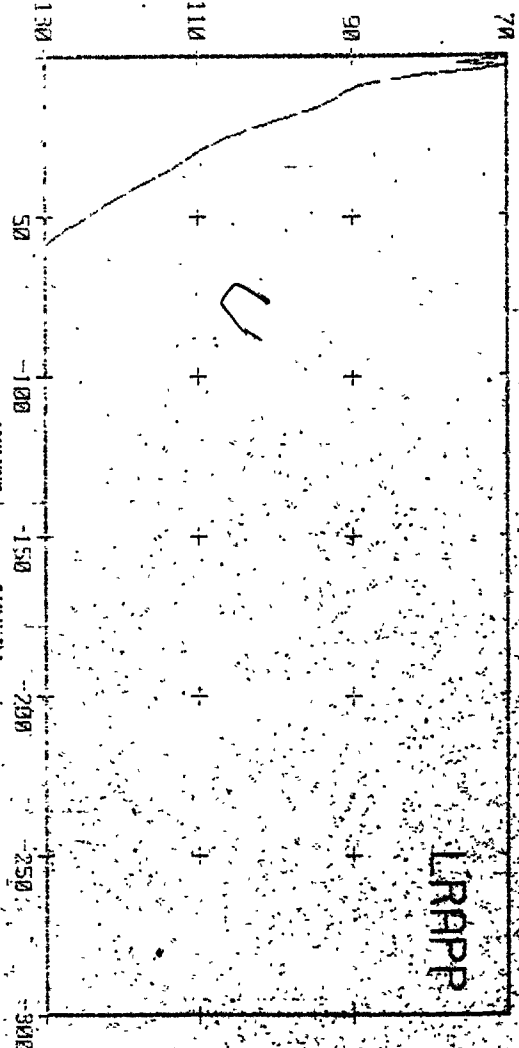
RECEIVED 11/11/50 11:11 AM



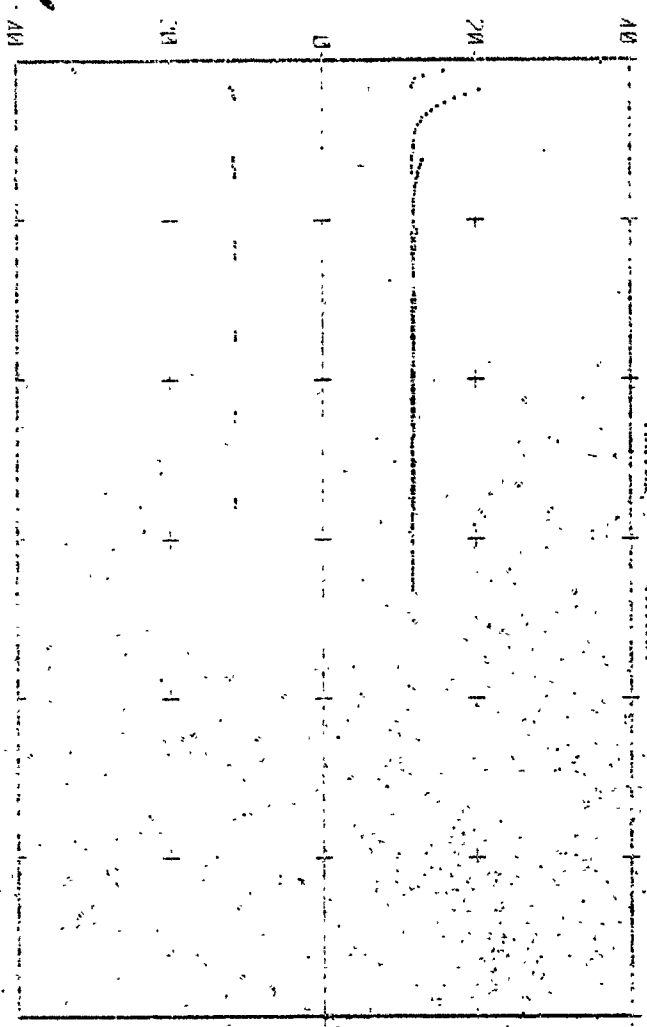




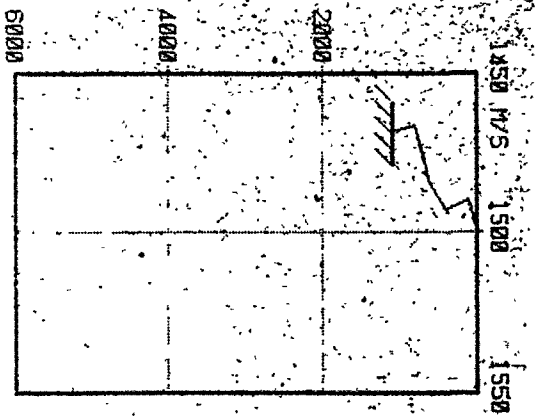
DB LOSS



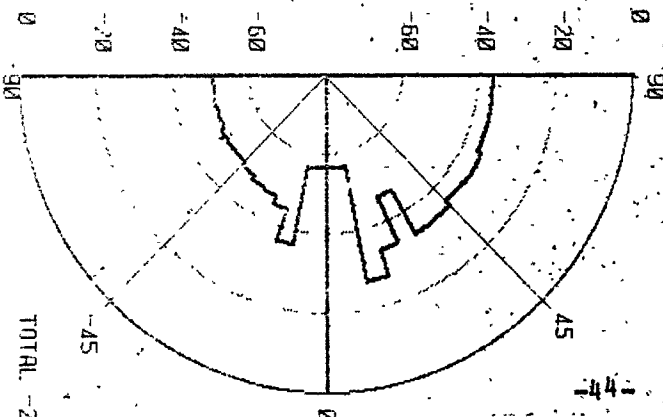
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



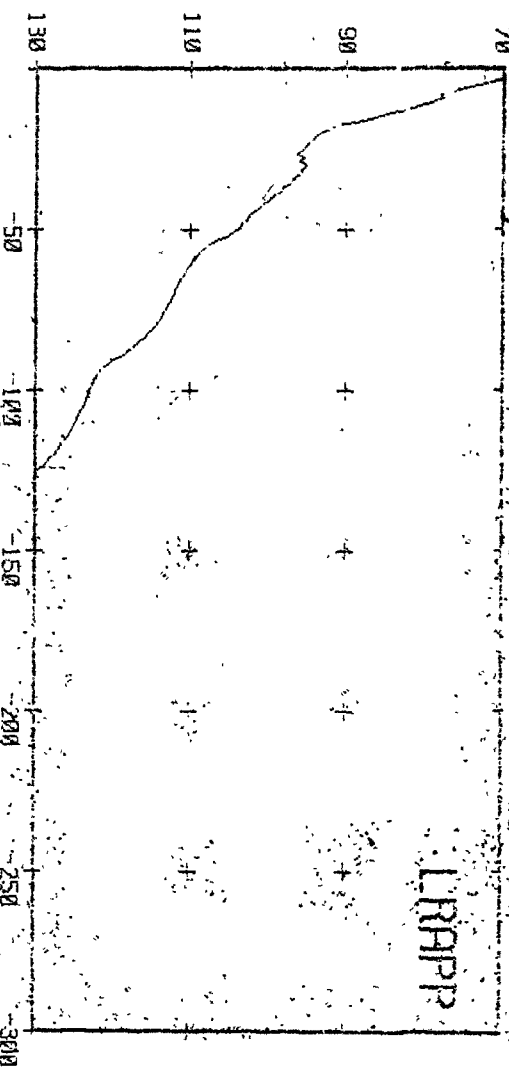
TOTAL -25.6 DB

RREB AB SUMMER

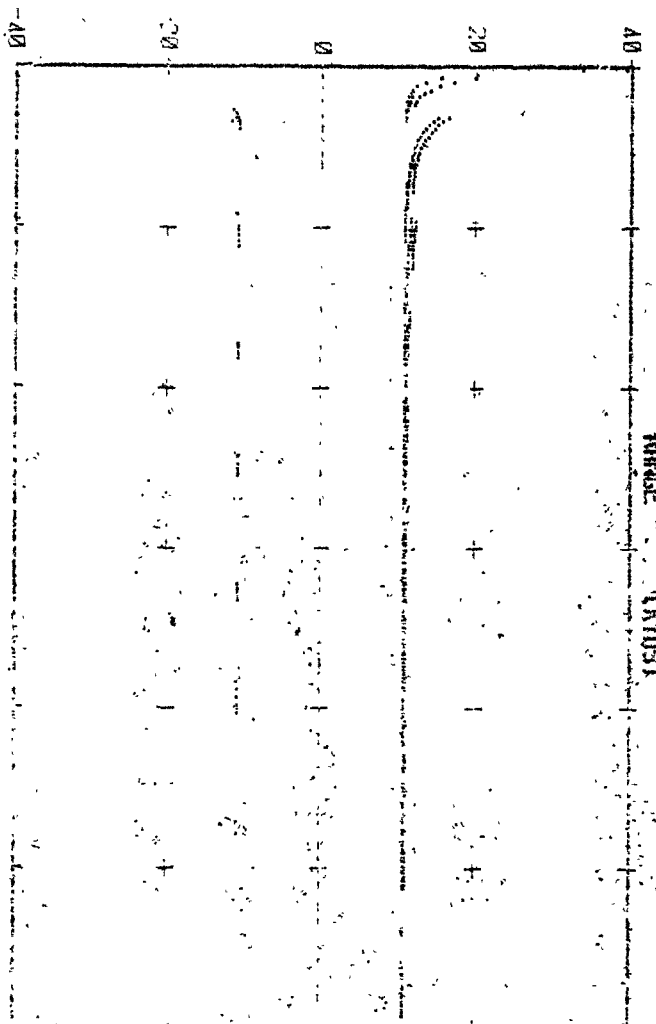
S. 250 N. 20.5 F. 50

LRAPP

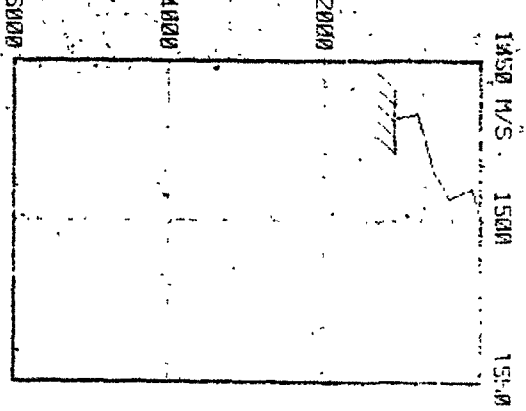
DB LOSS



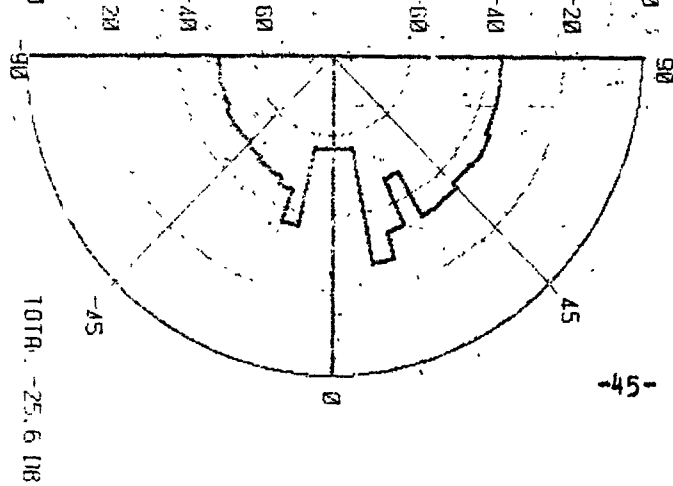
ARRIVAL ANGLE



DEPTH IN METERS

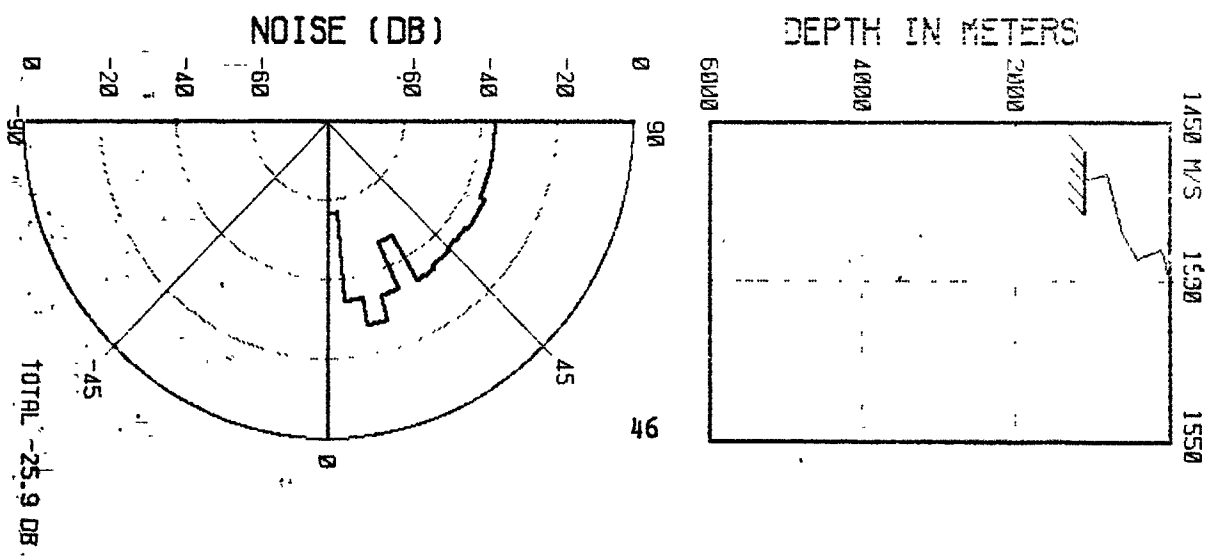
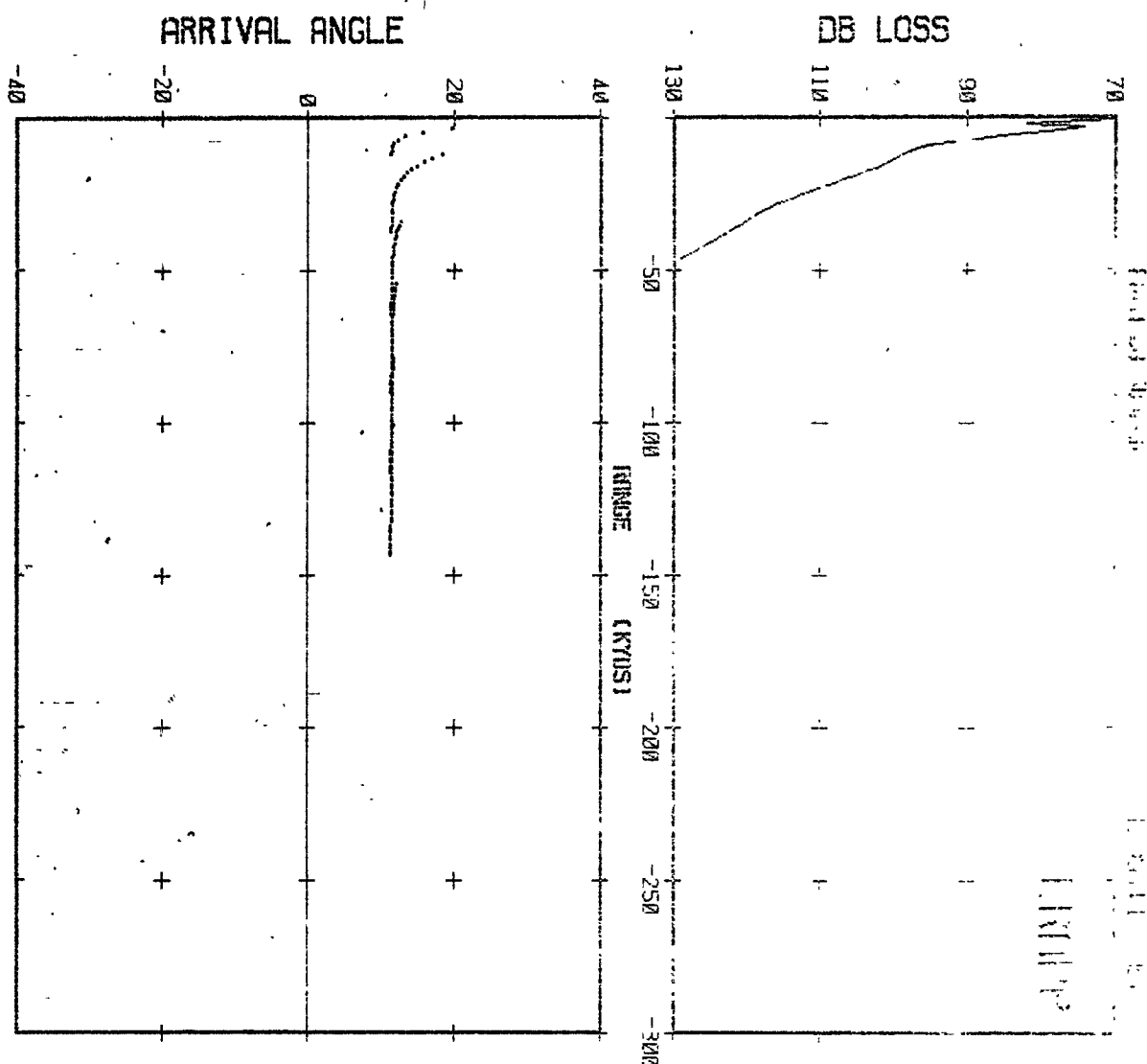


NOISE DB



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TOTR. -25.6 DB

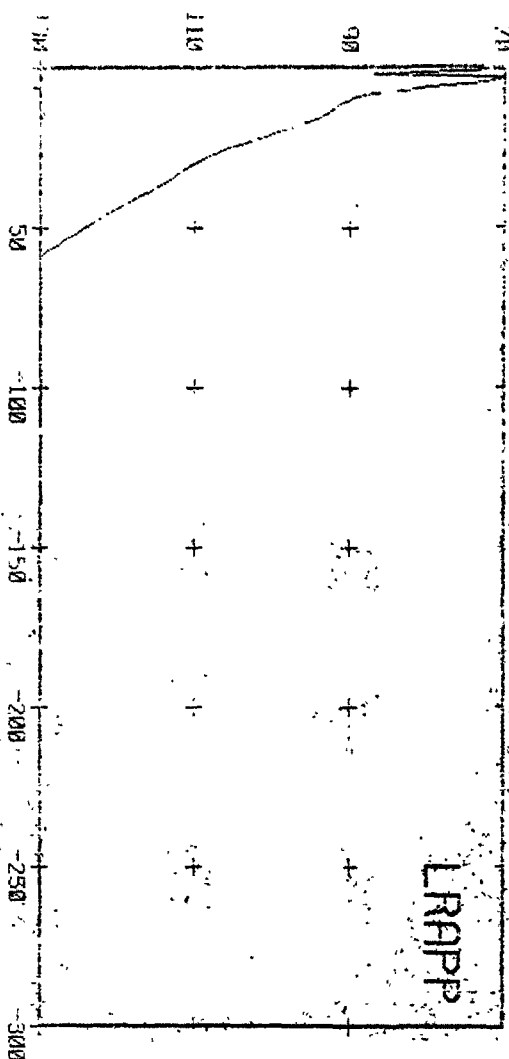


CRH1 AIR SURVEY

3 50 R. 3519 F. 50

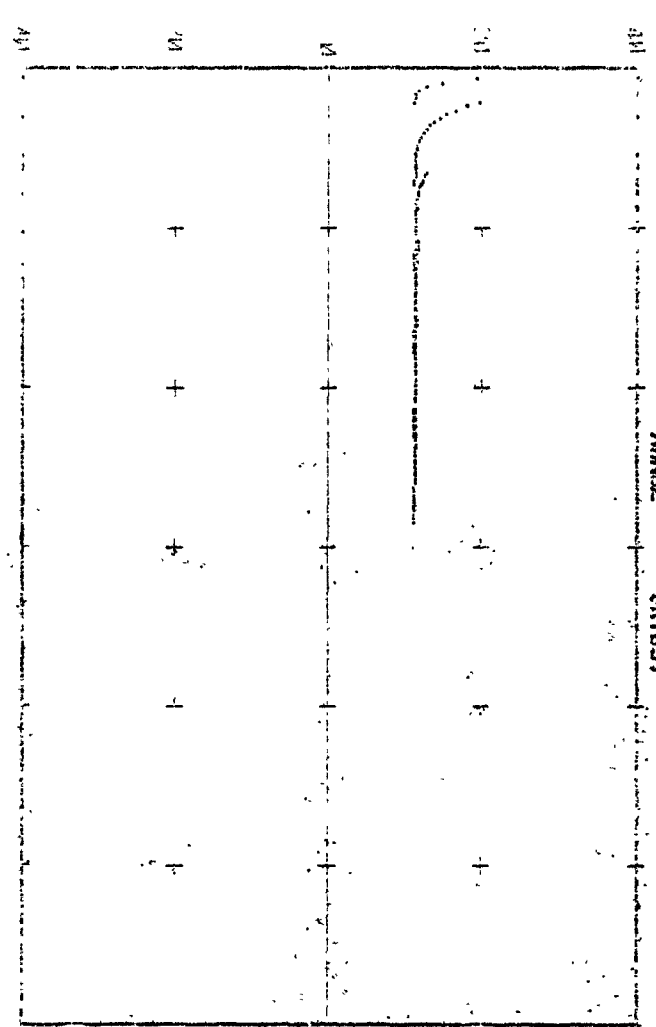
1450 M/S 1500 1550

DB LOSS

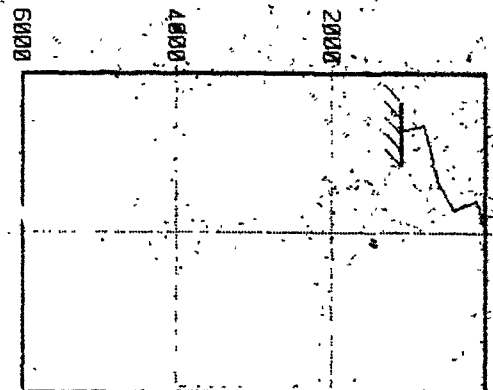


LRAPP

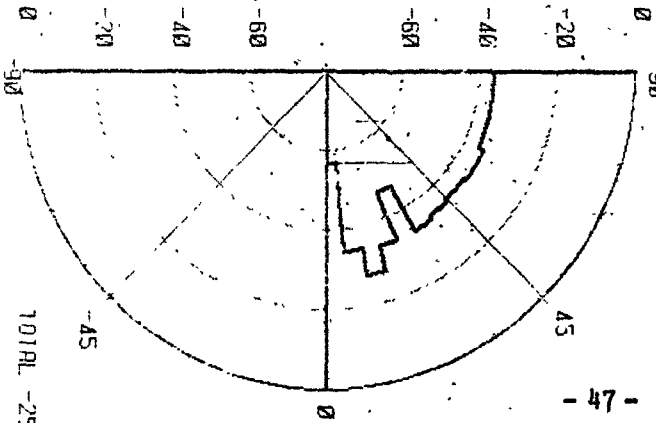
ARRIVAL ANGLE



DEPTH IN METERS

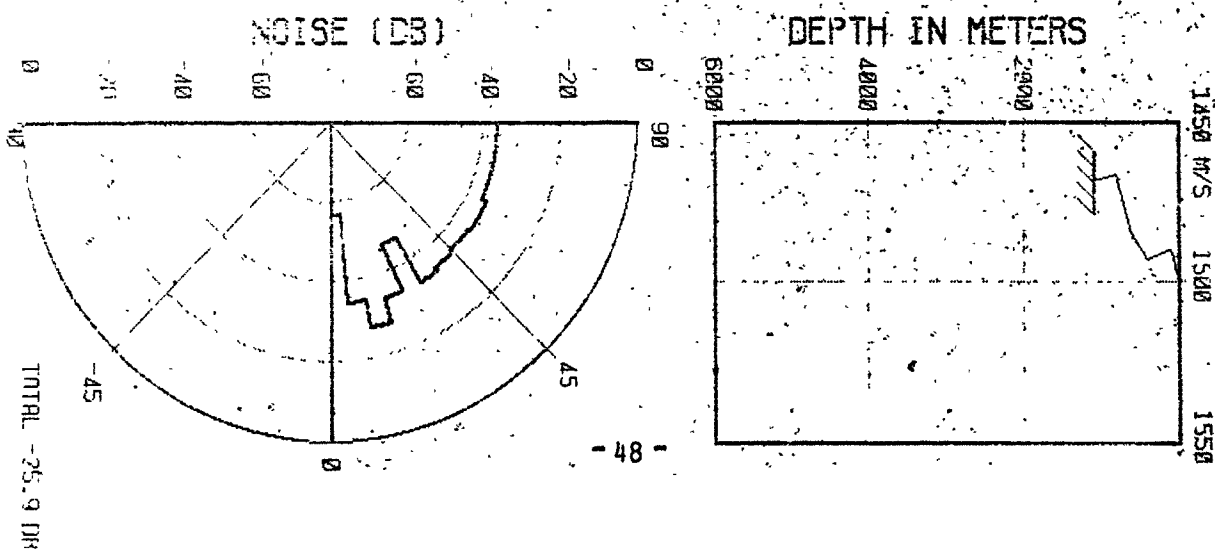
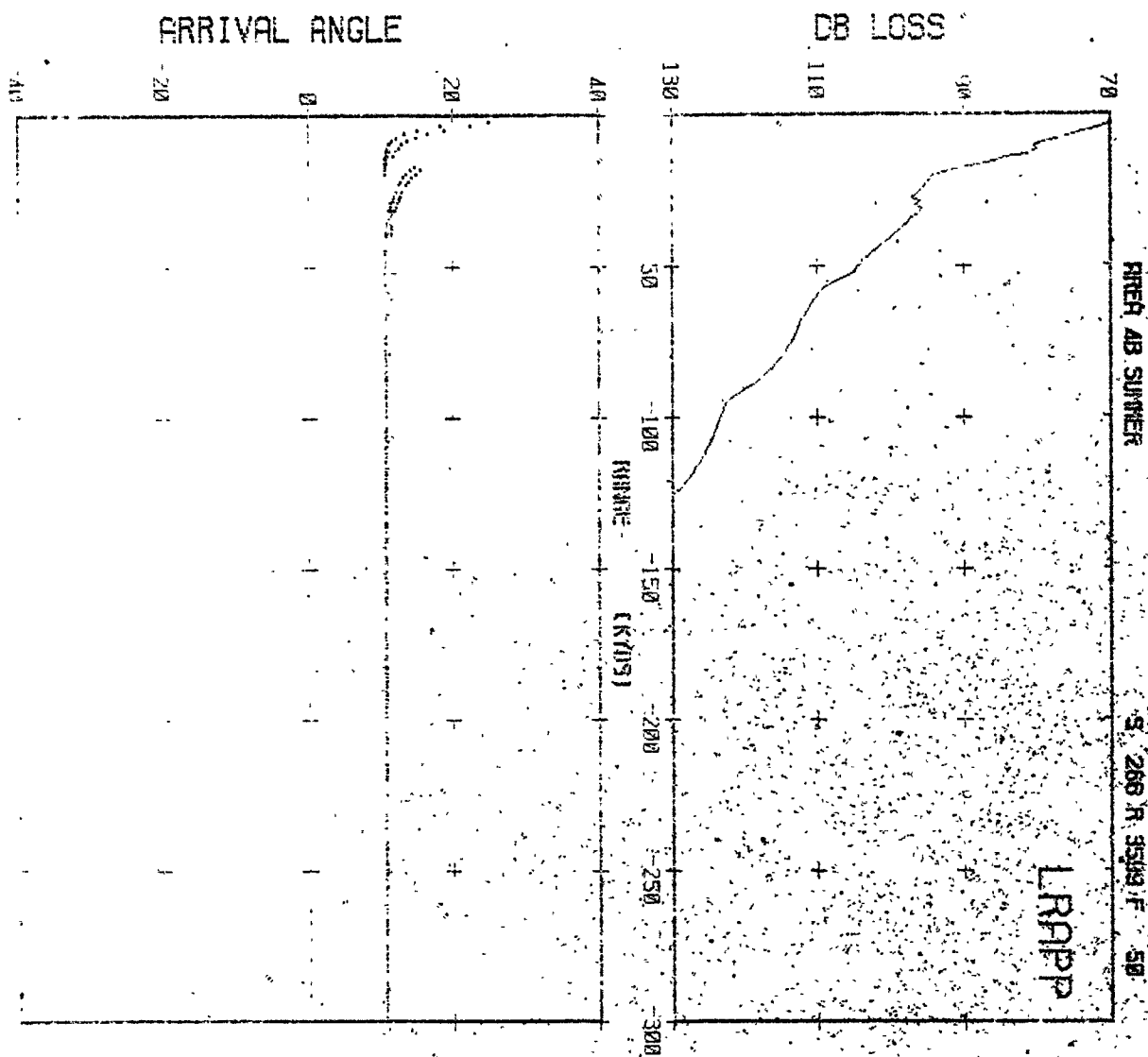


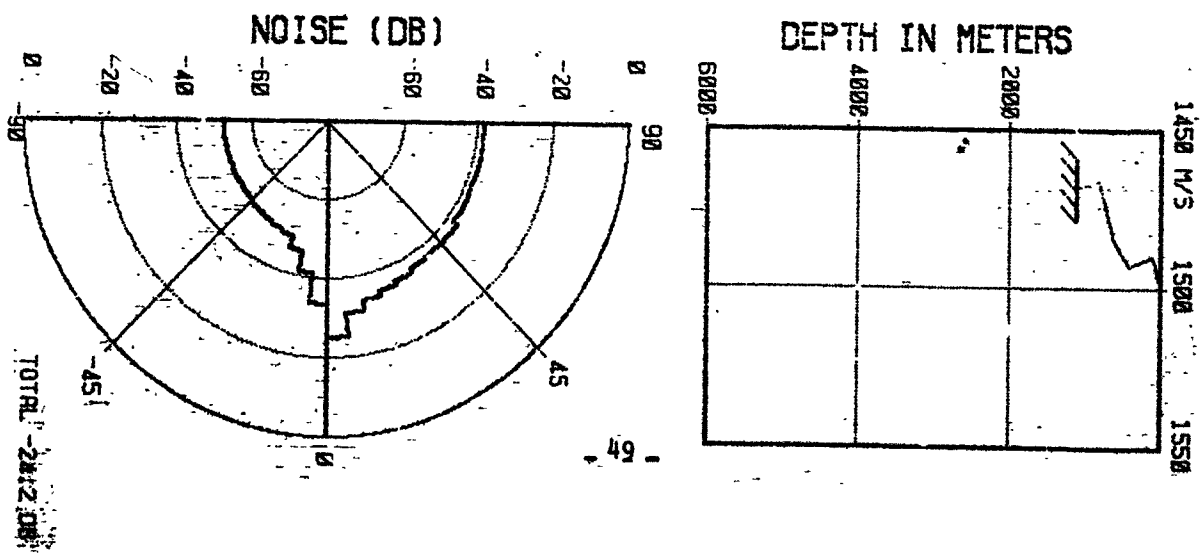
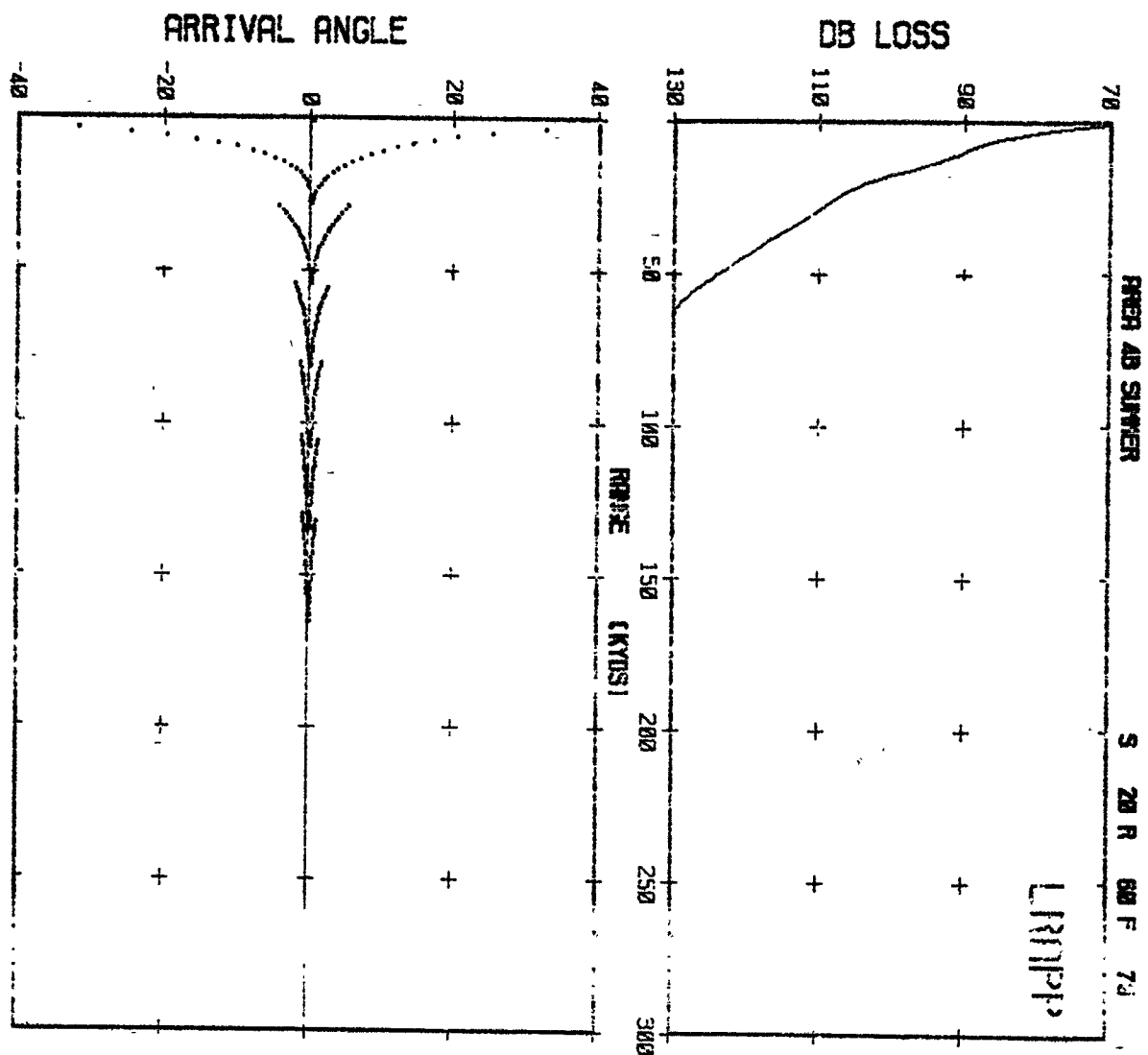
NOISE (DB)

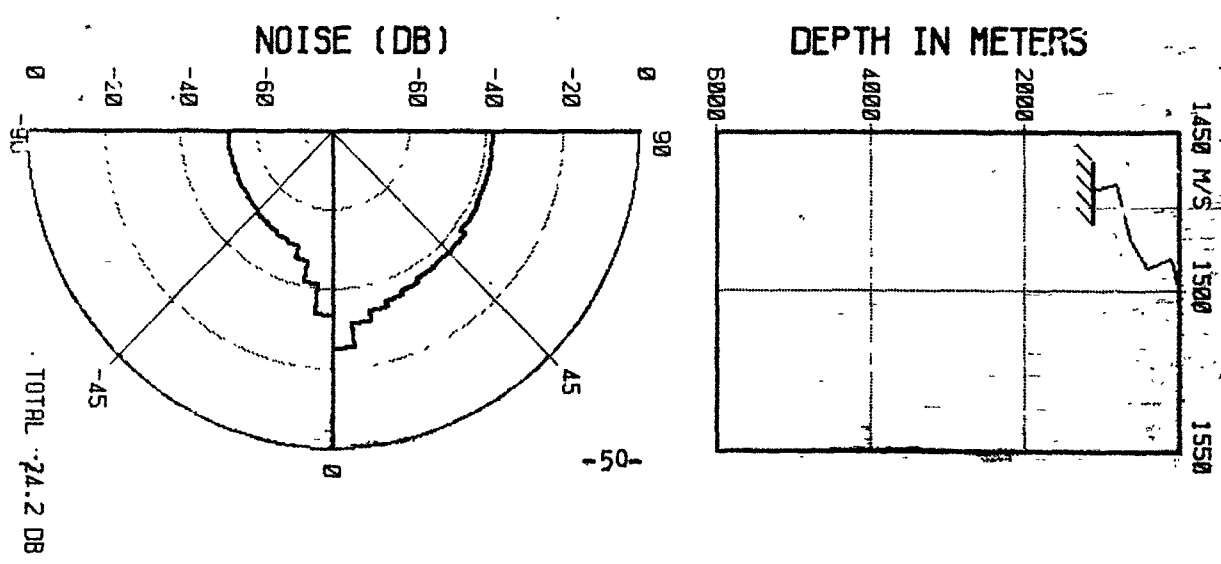
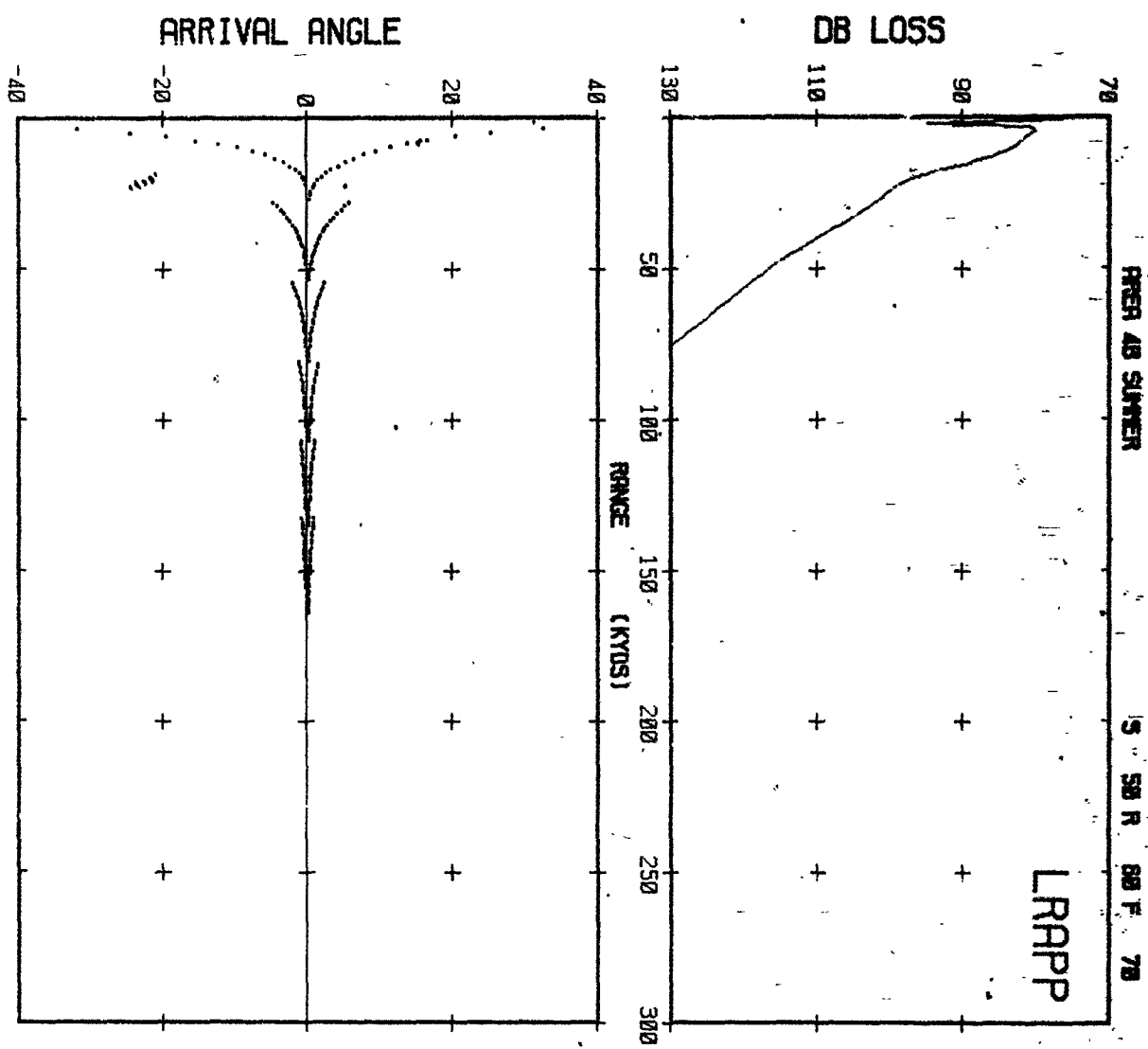


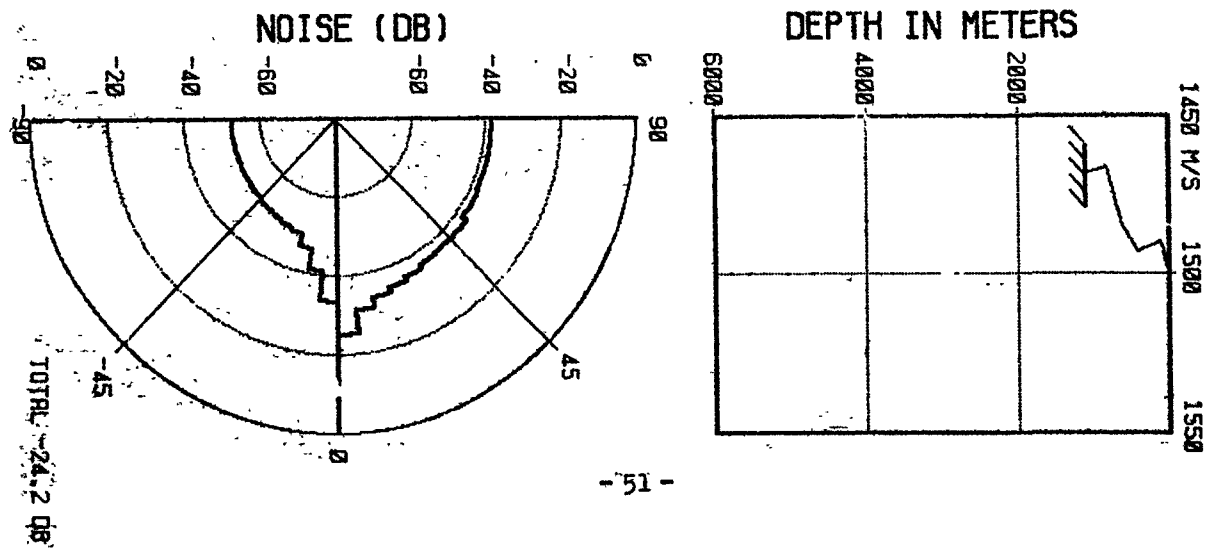
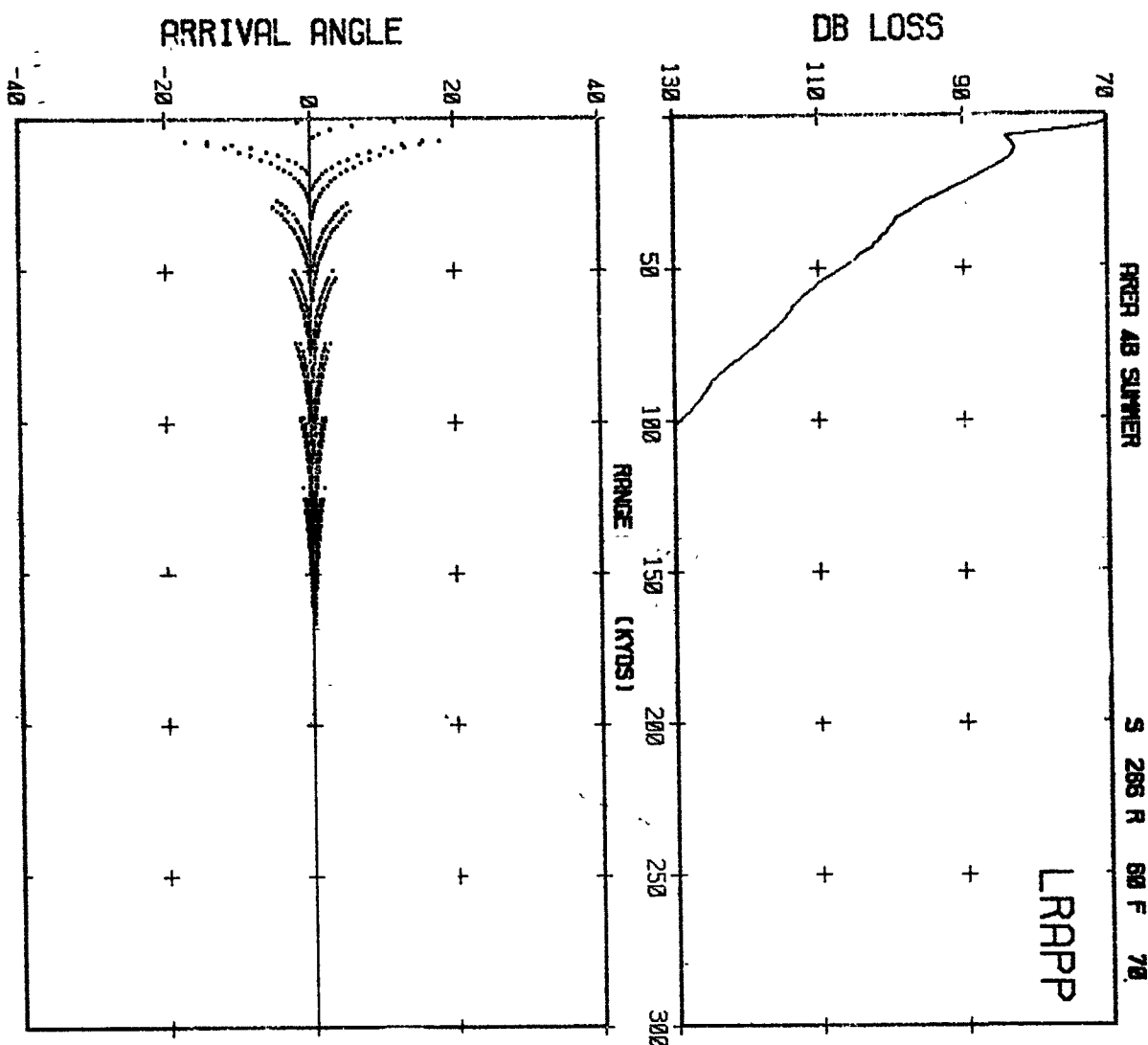
TOTAL -25.9 DB

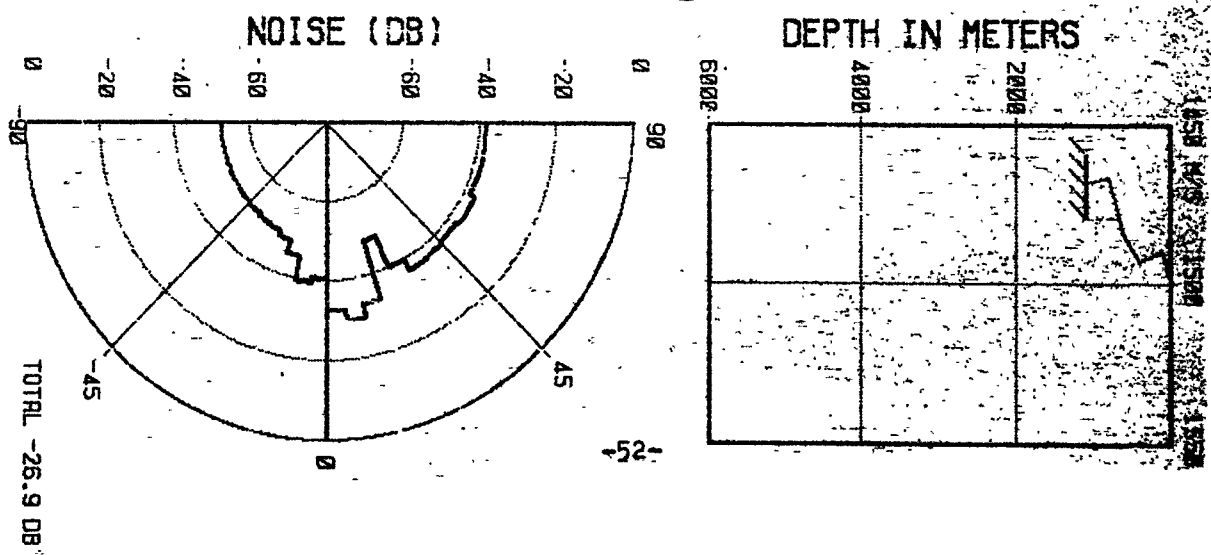
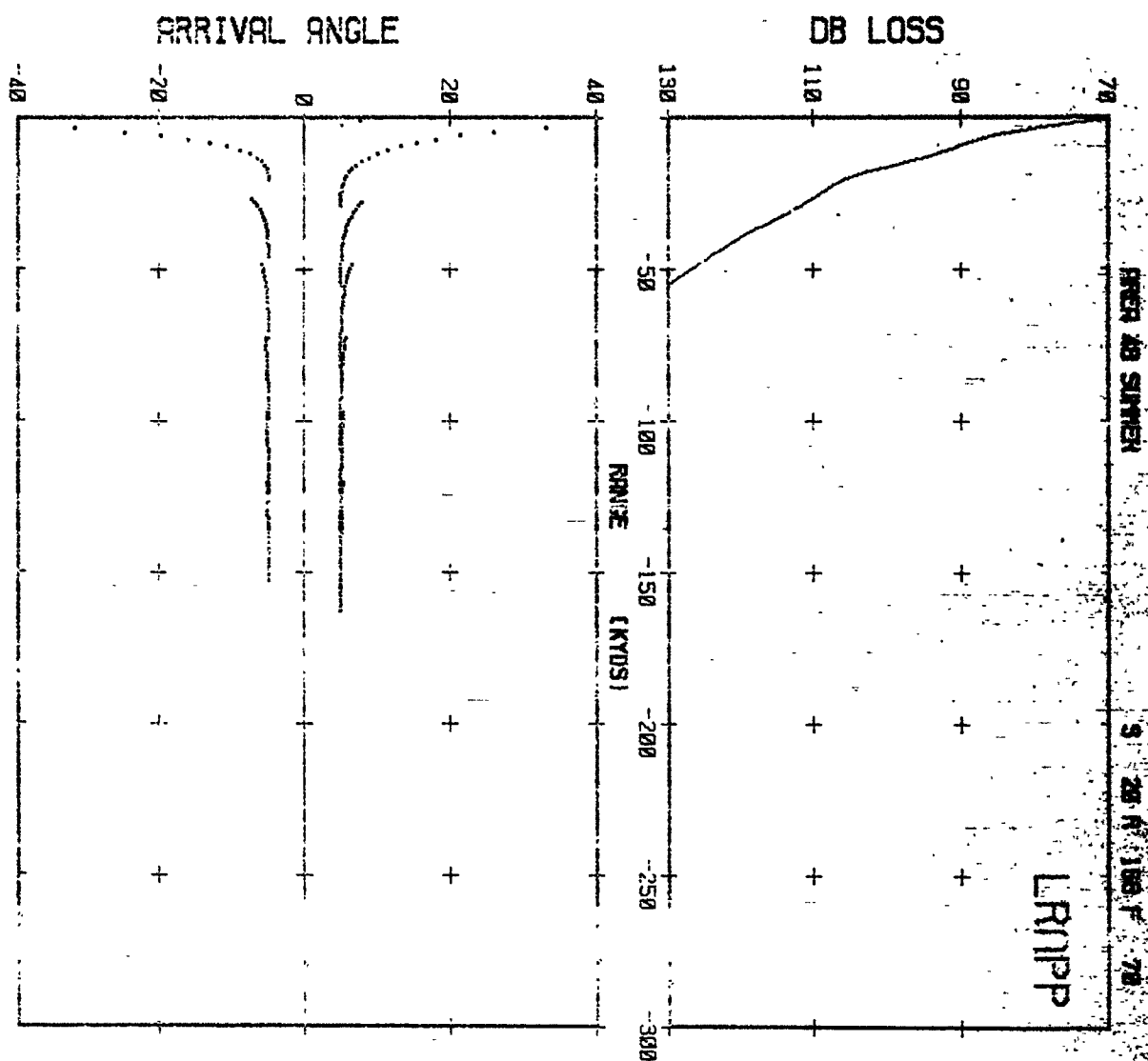
- 47 -









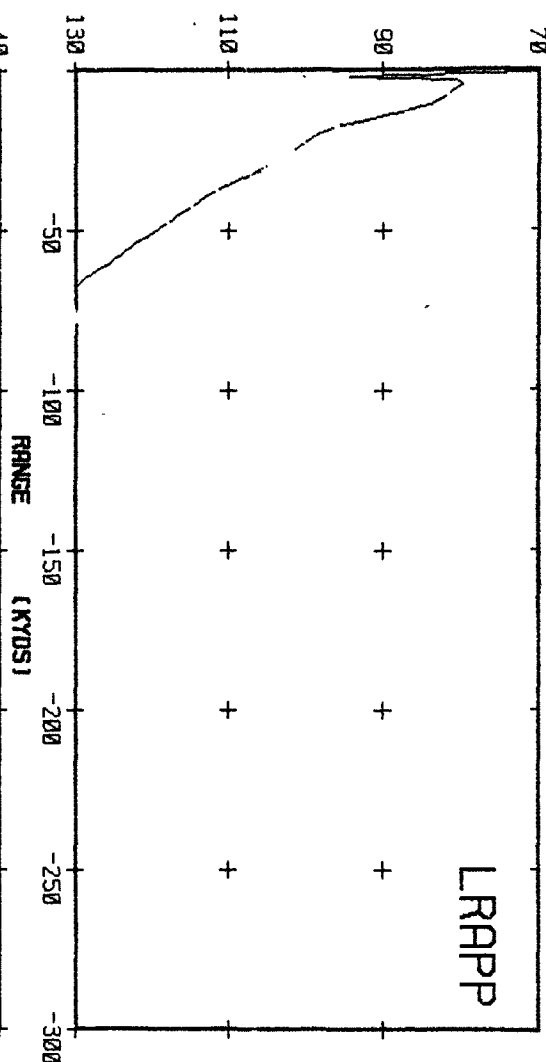


ARRER AB SUMMER

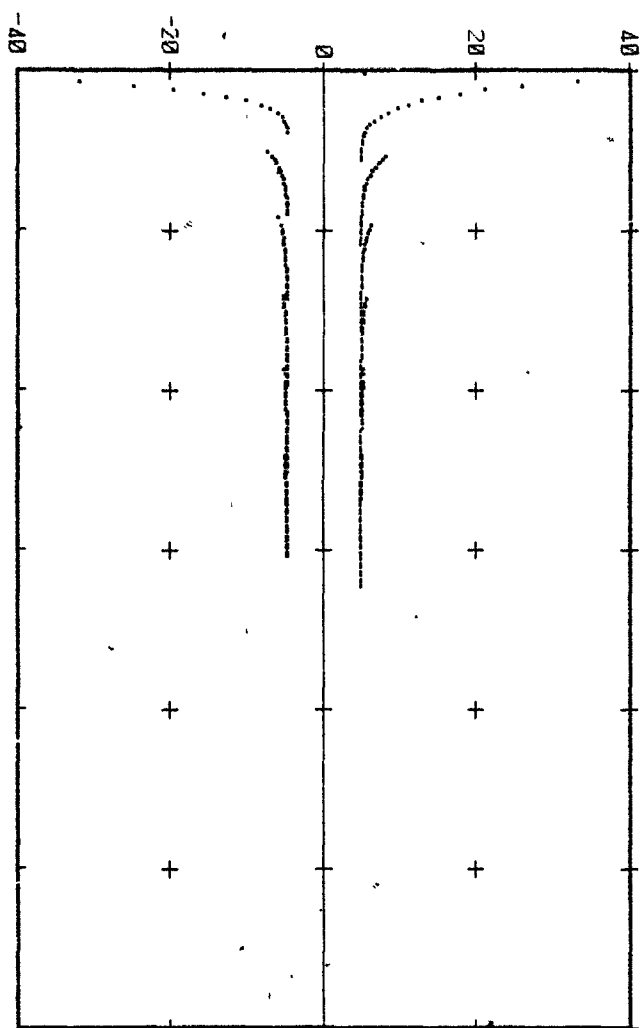
S 50 R 166 F 70

LRAPP

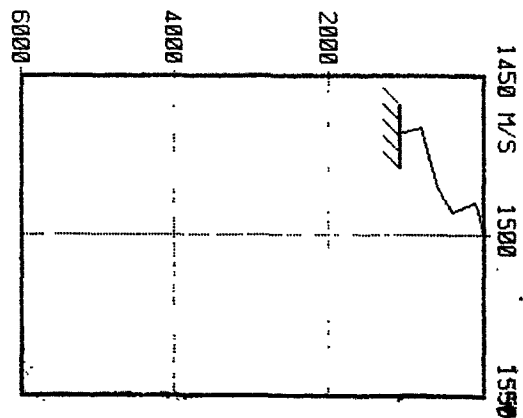
DB LOSS



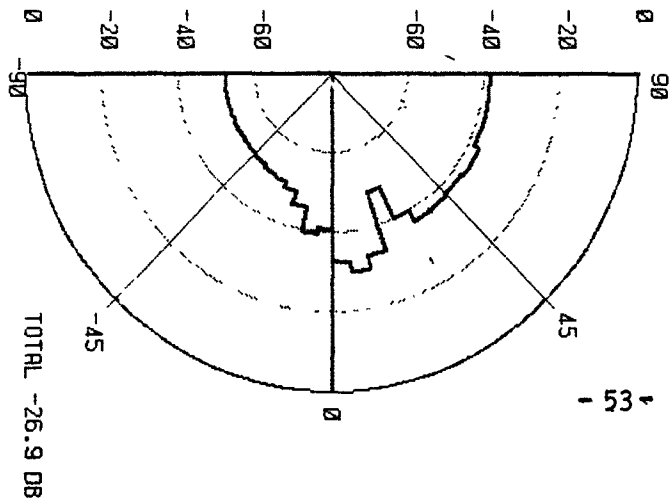
ARRIVAL ANGLE



DEPTH IN METERS

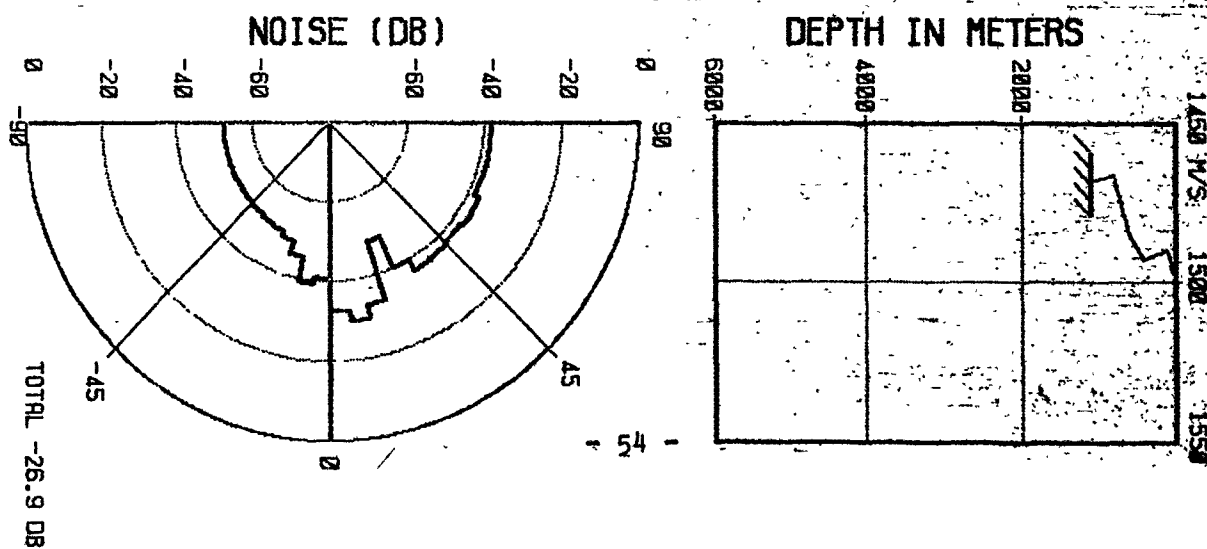
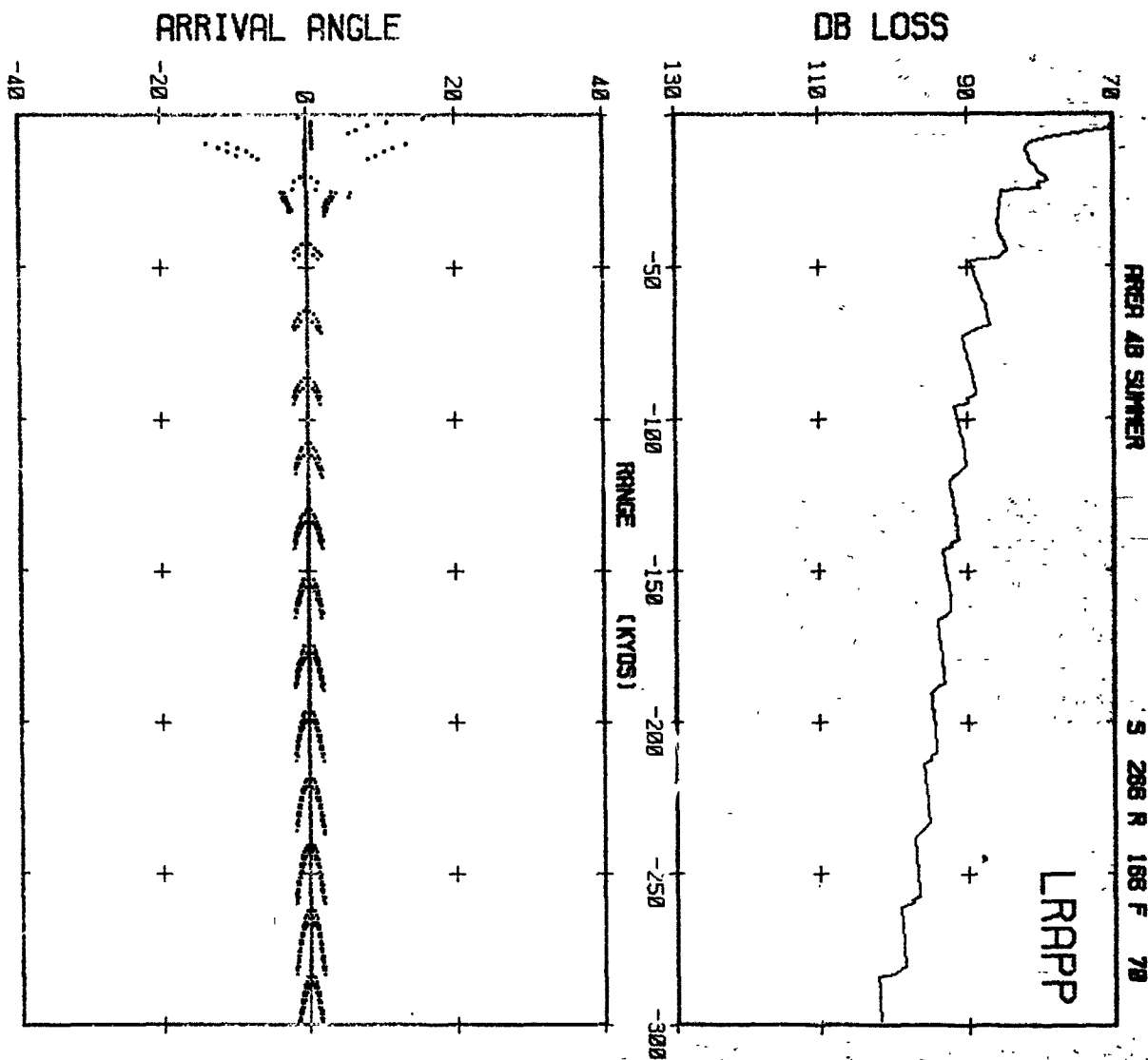


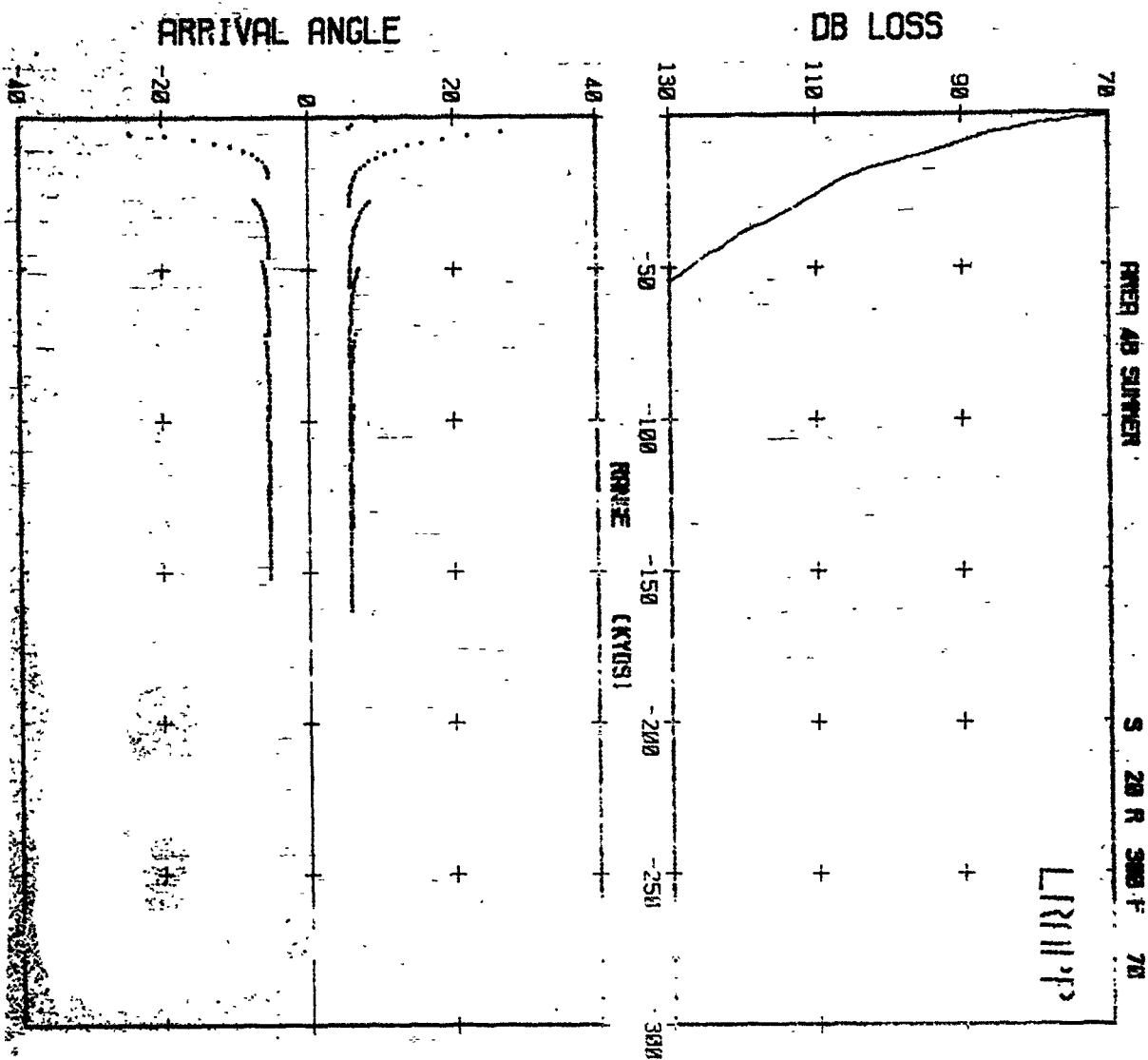
NOISE (DB)

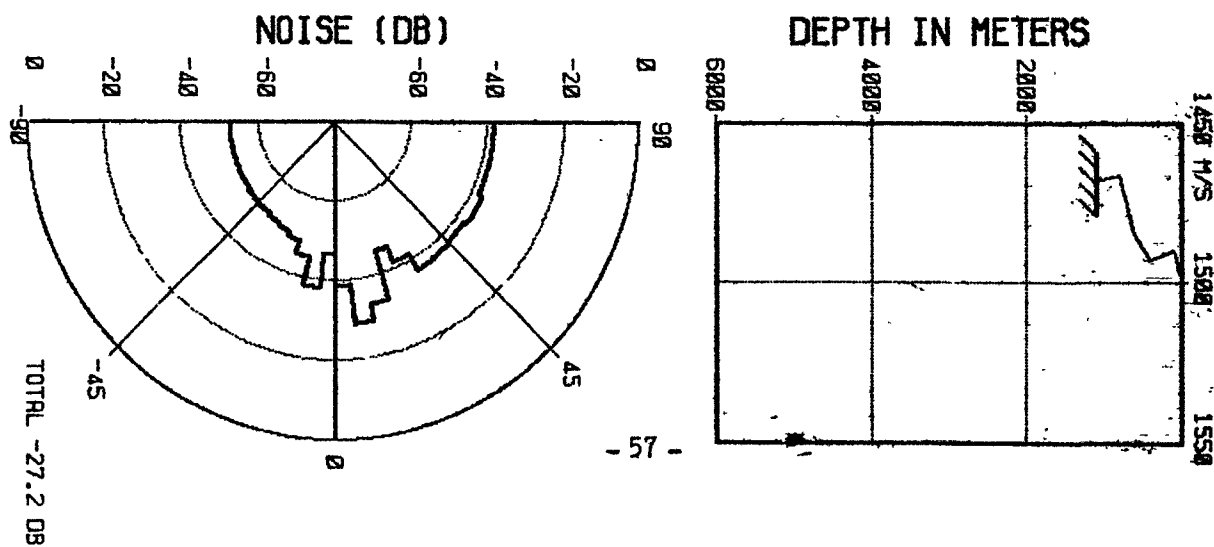
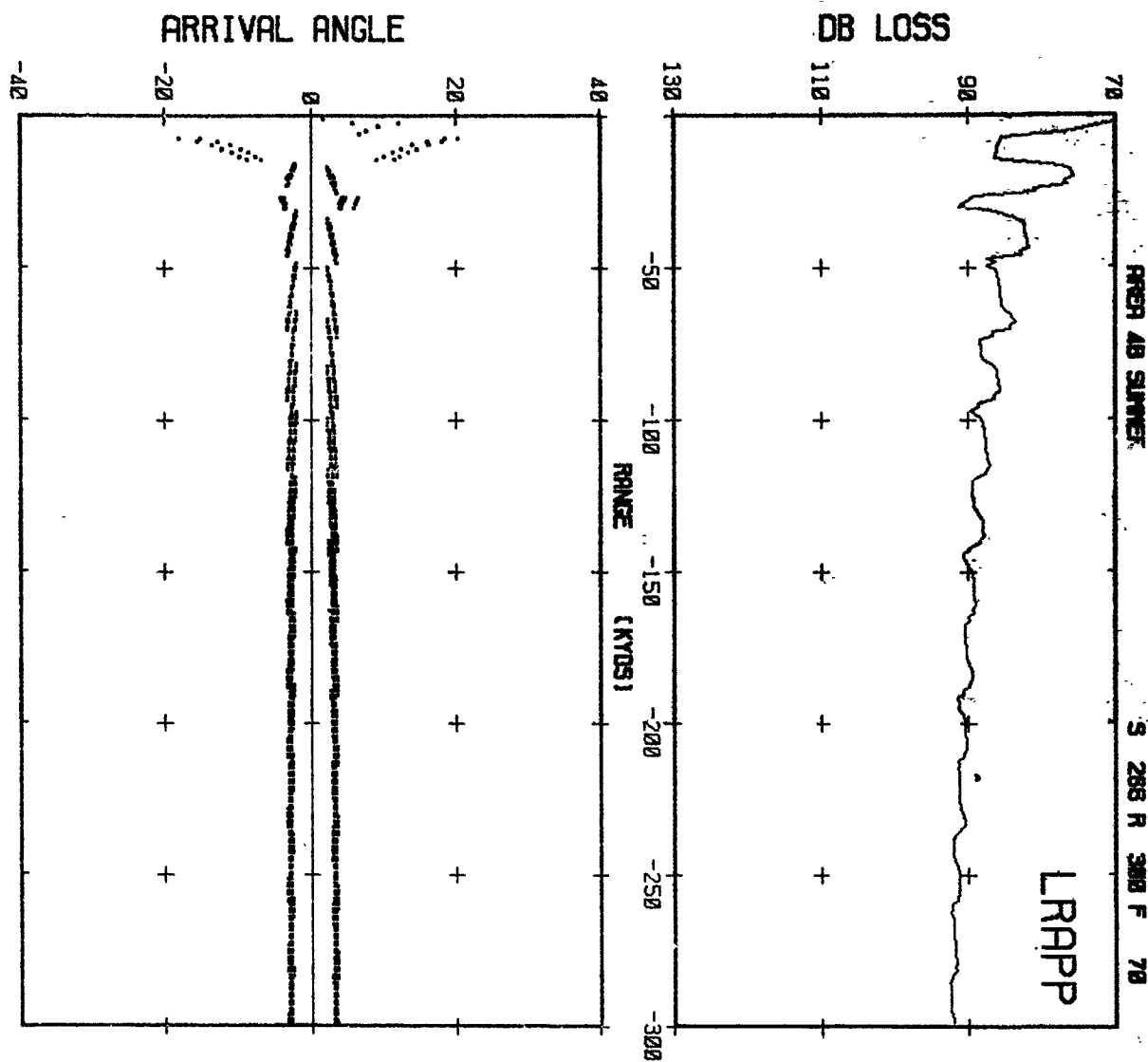


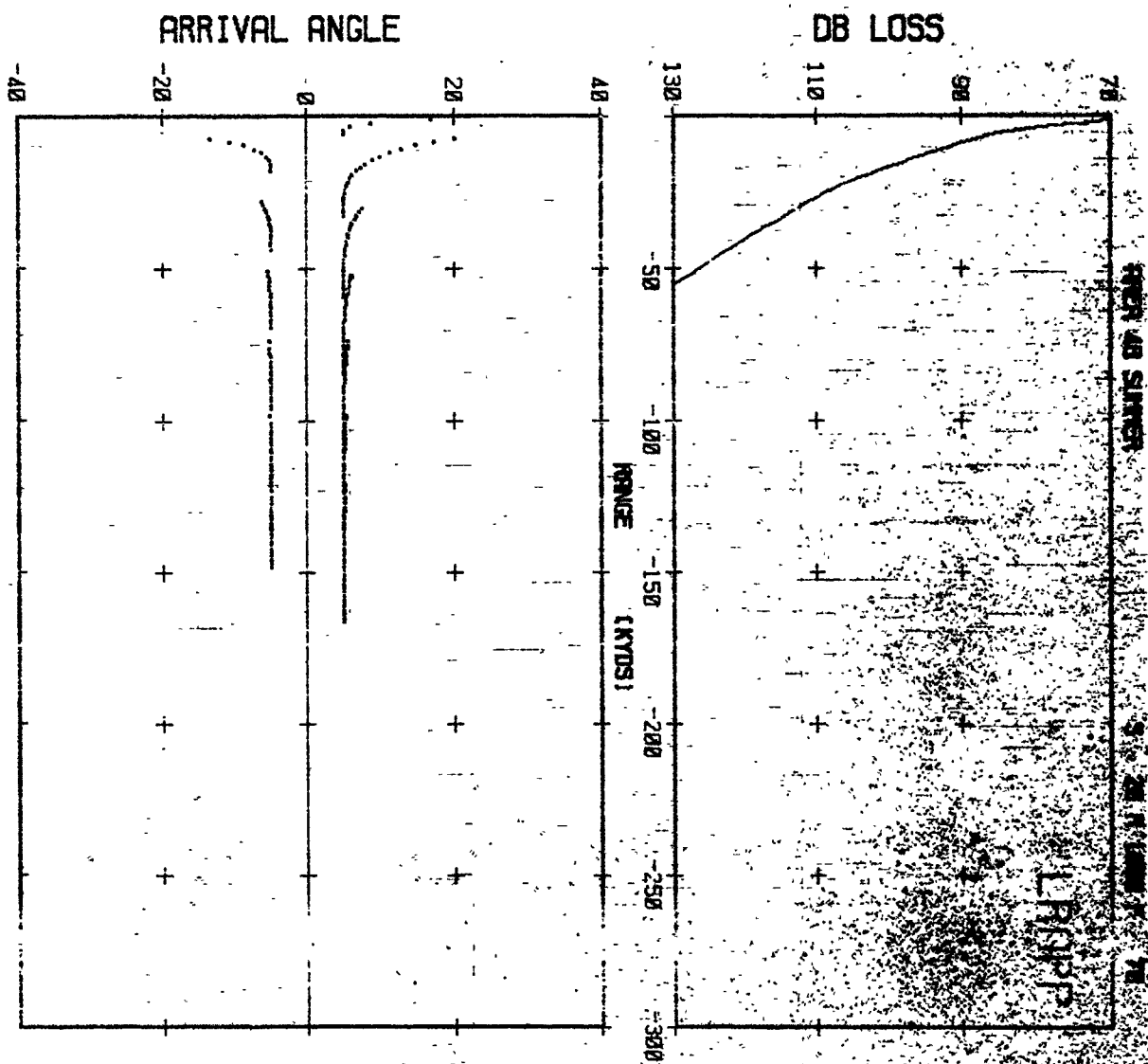
TOTAL -26.9 DB

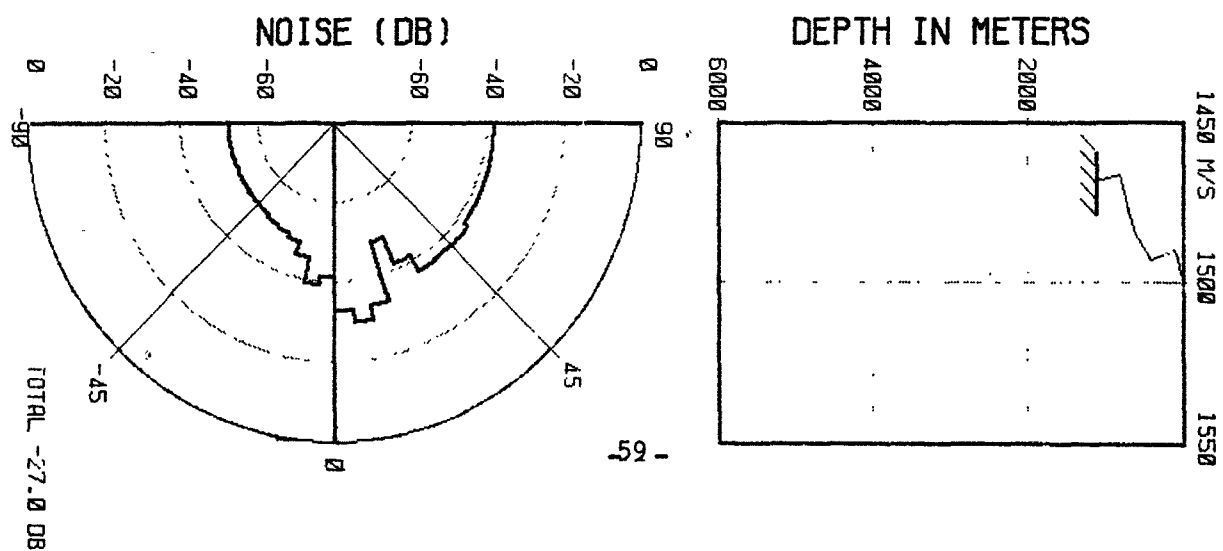
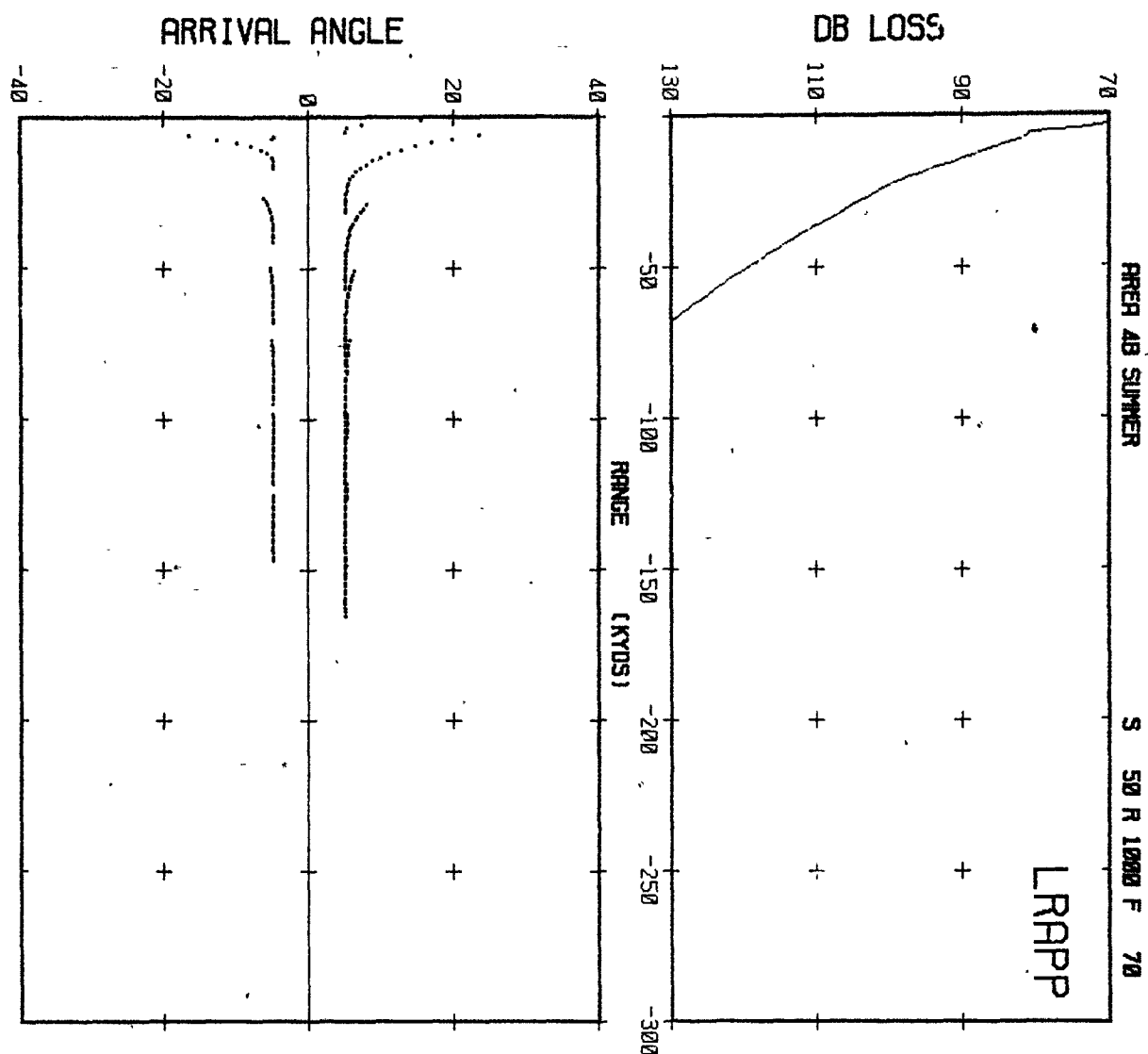
53

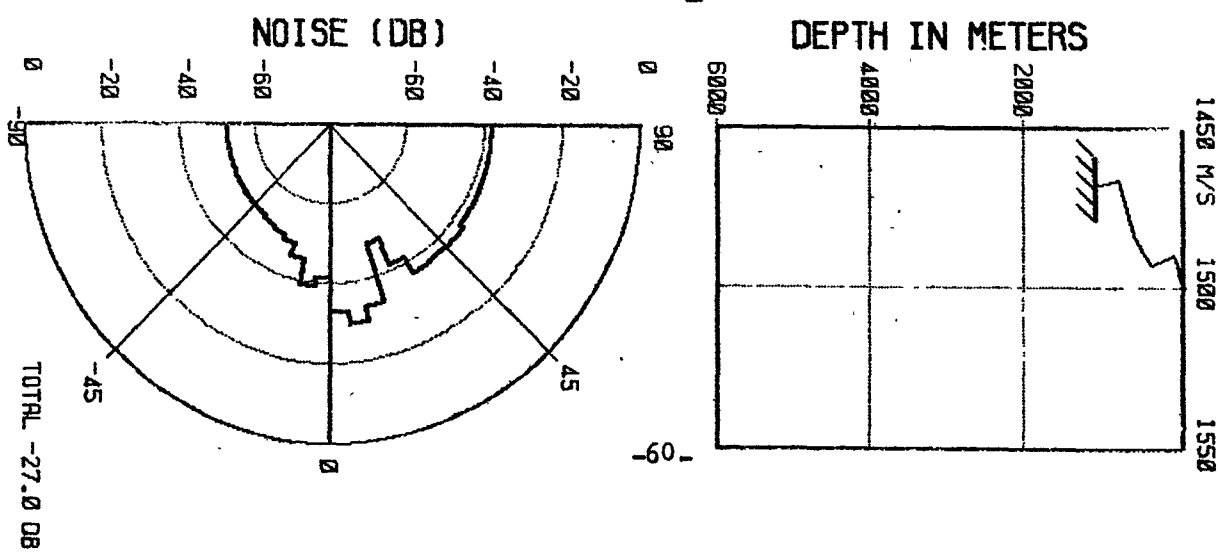
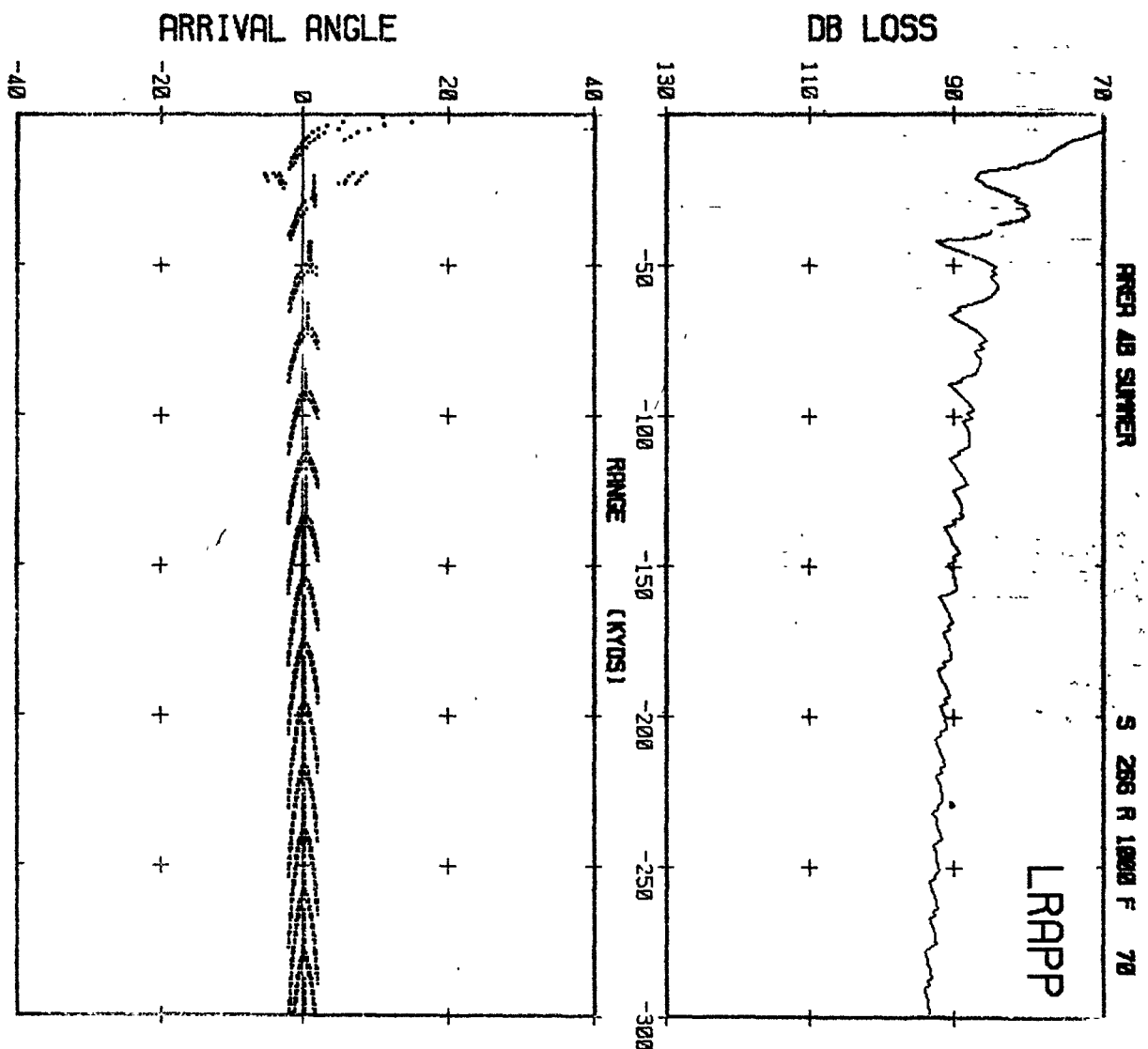












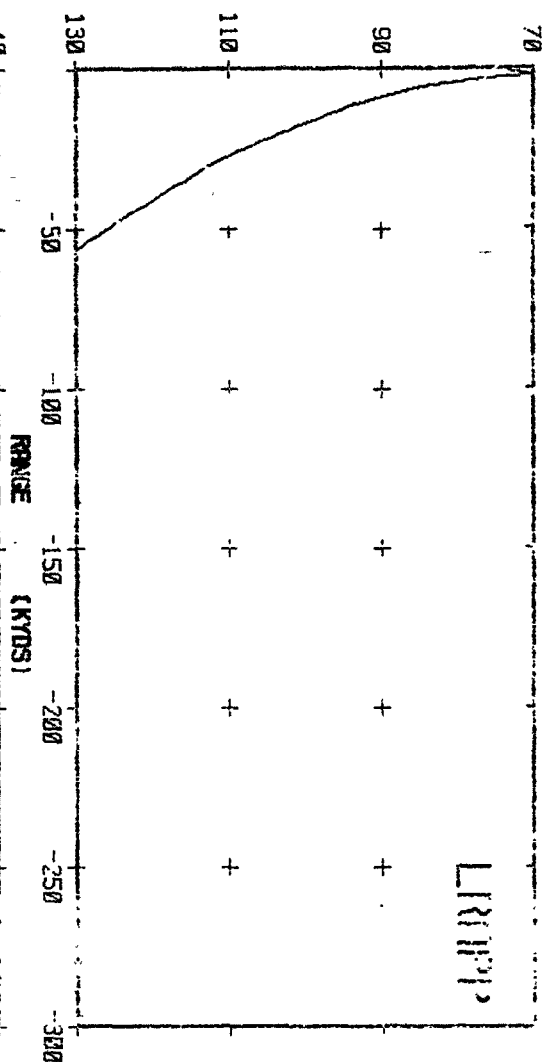
RIVER AB SINKER

S 20 R 1312 F 70

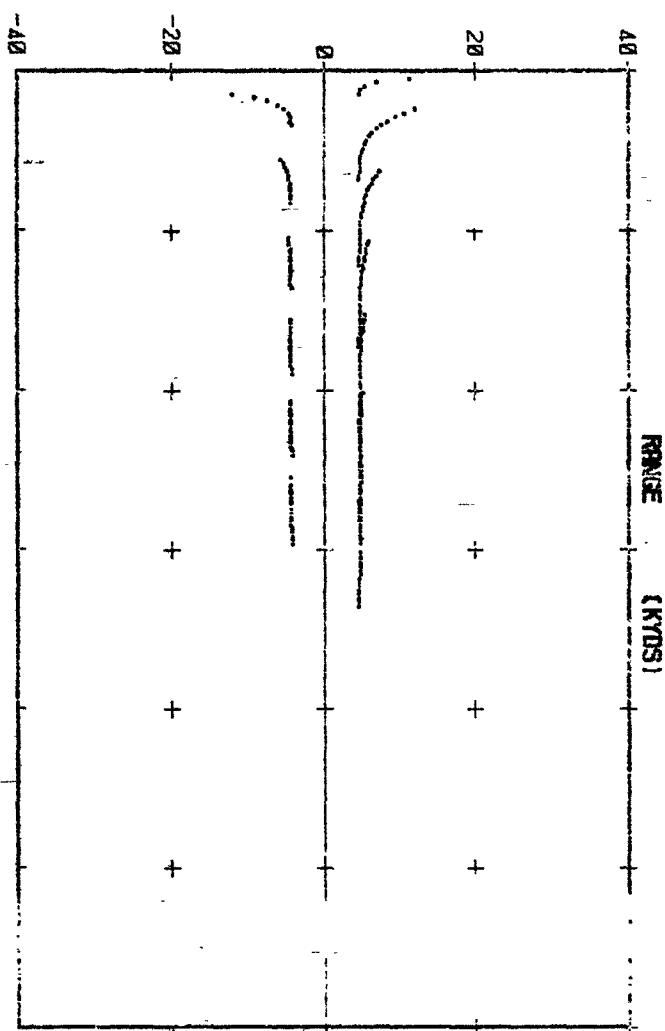
1450 M/S 1500

1550

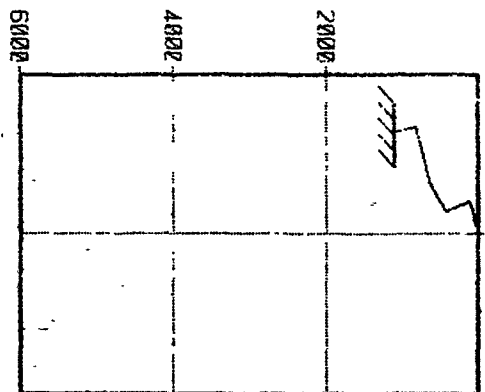
DB LOSS



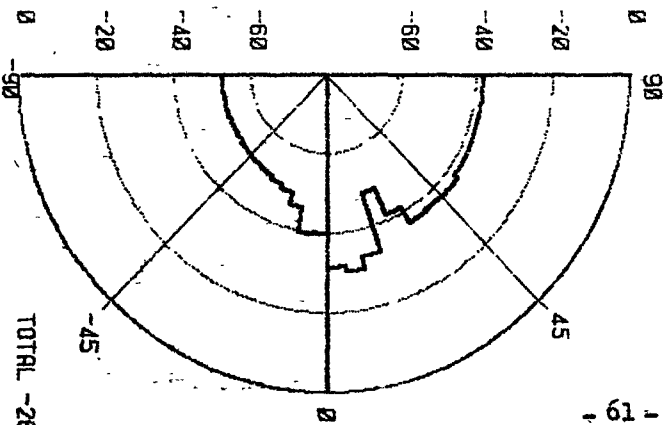
ARRIVAL ANGLE



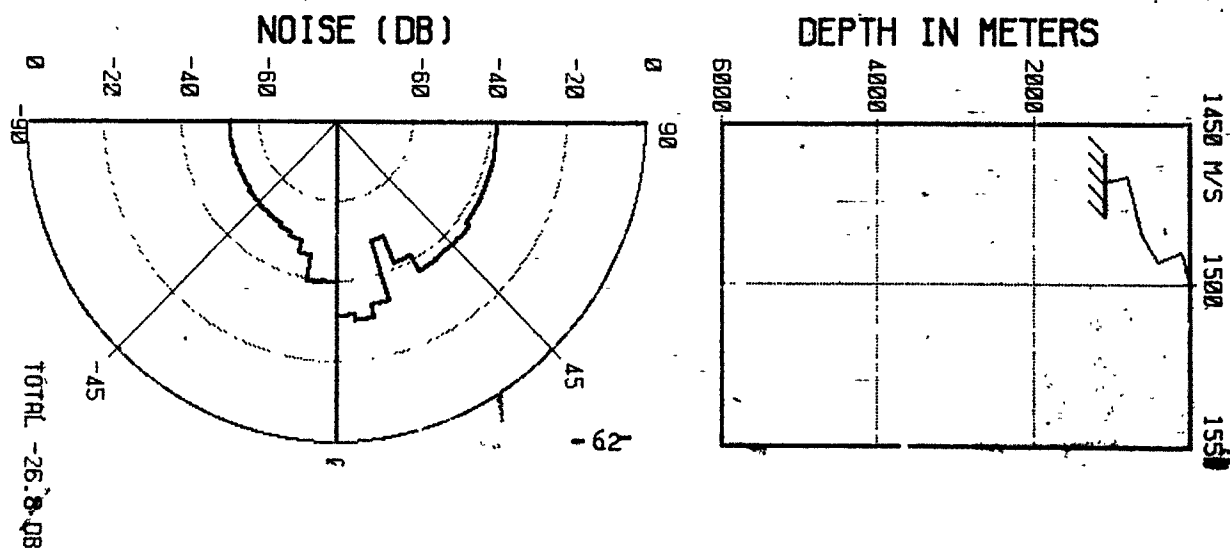
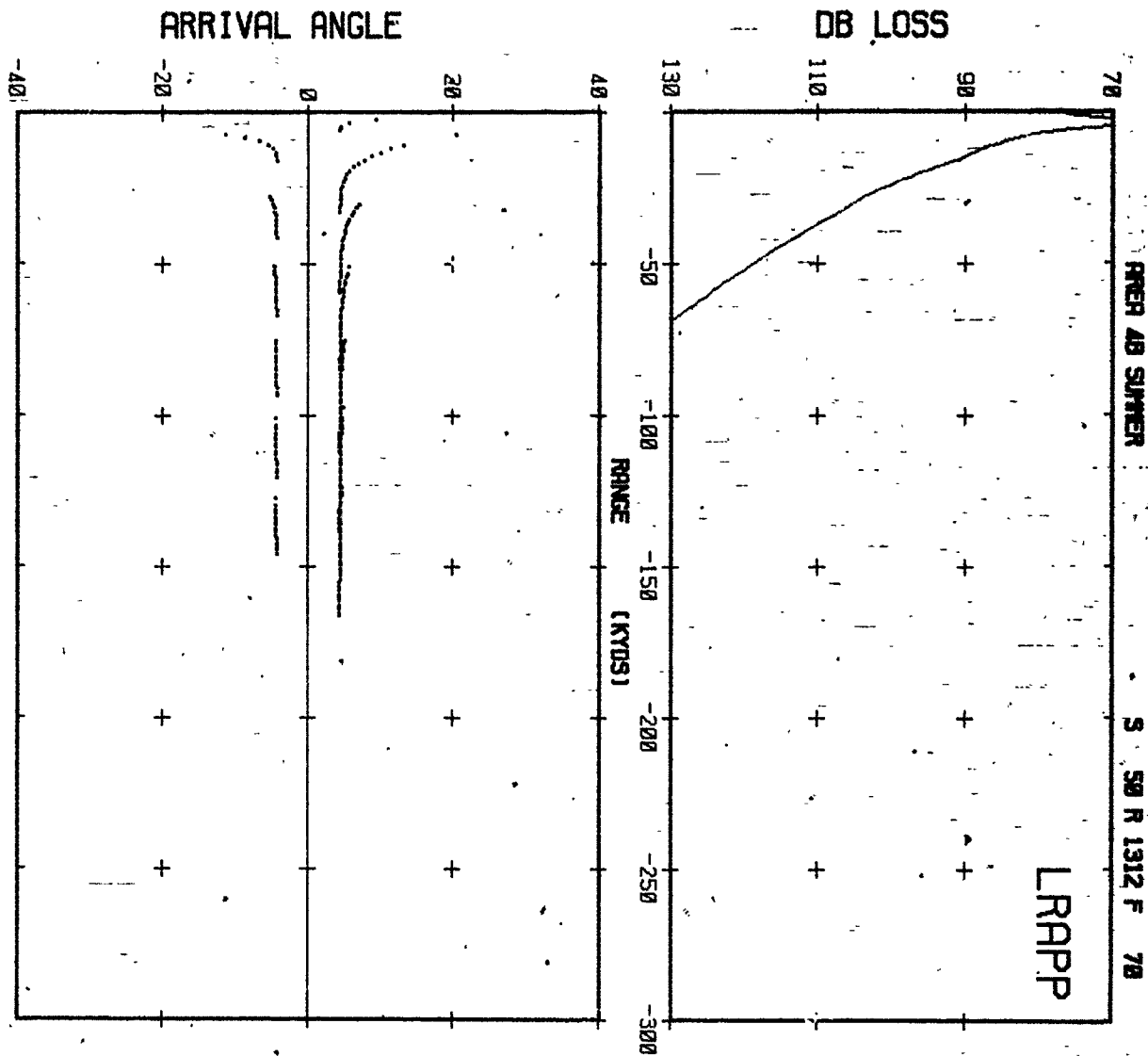
DEPTH IN METERS



NOISE (DB)



TOTAL -26.8 DB



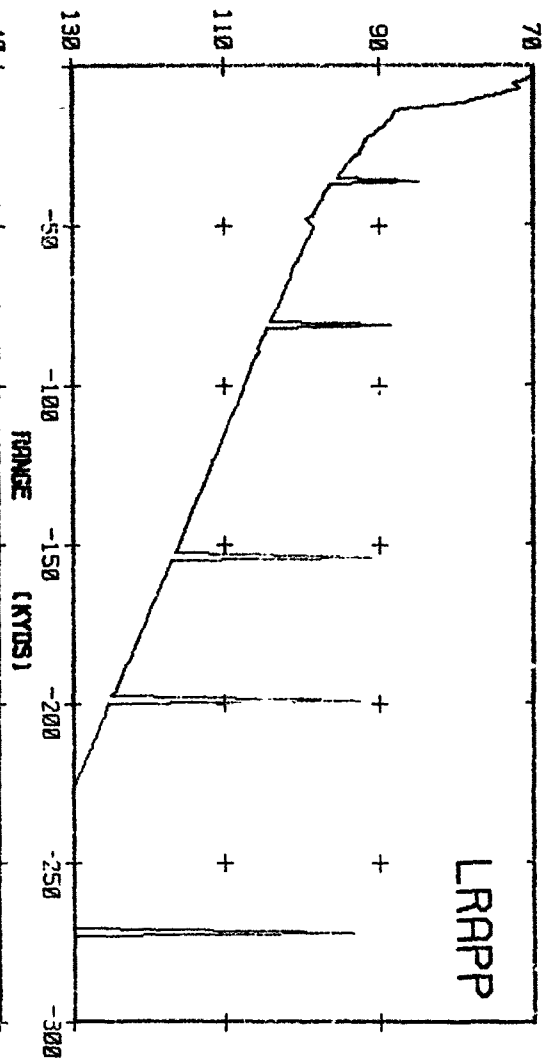
TOTAL -26.8-DB

ARRR 4B SUMMER

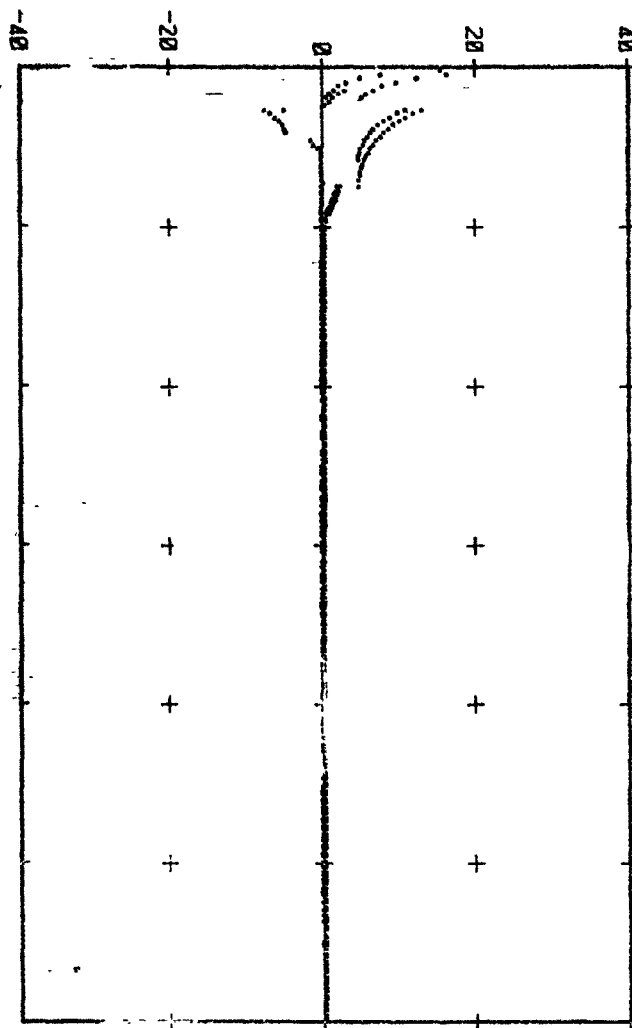
S 288 R 1312 F 78

1450 M/S 1500 1550

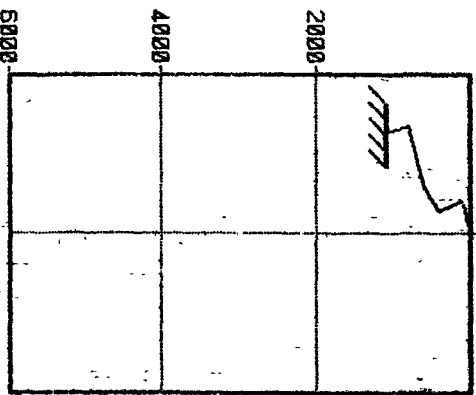
DB LOSS



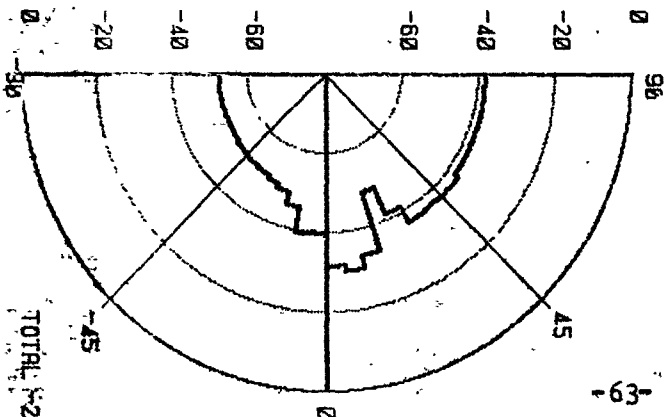
ARRIVAL ANGLE



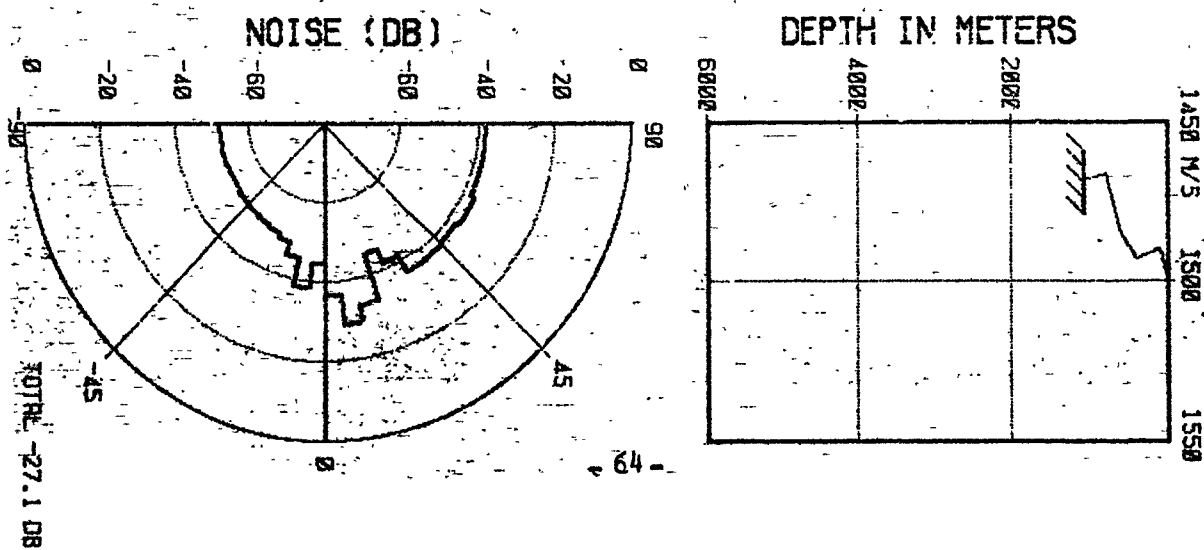
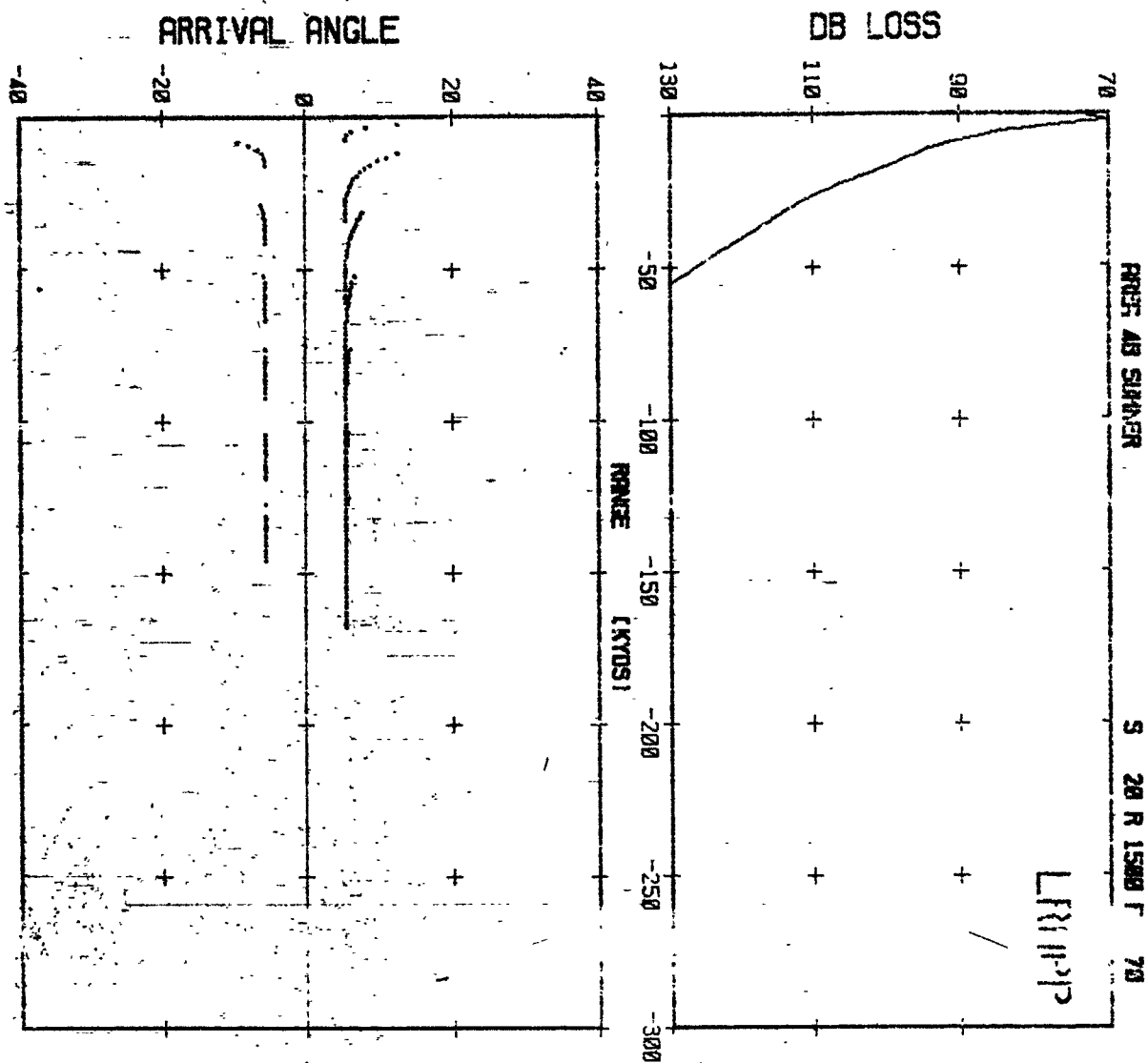
DEPTH IN METERS



NOISE (DB)



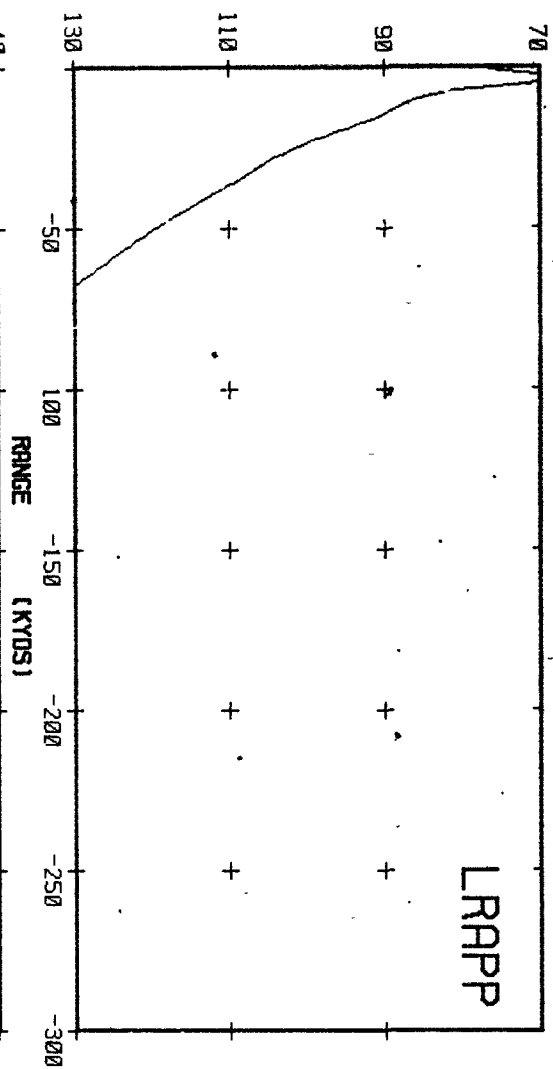
TOTAL: -26.8 DB



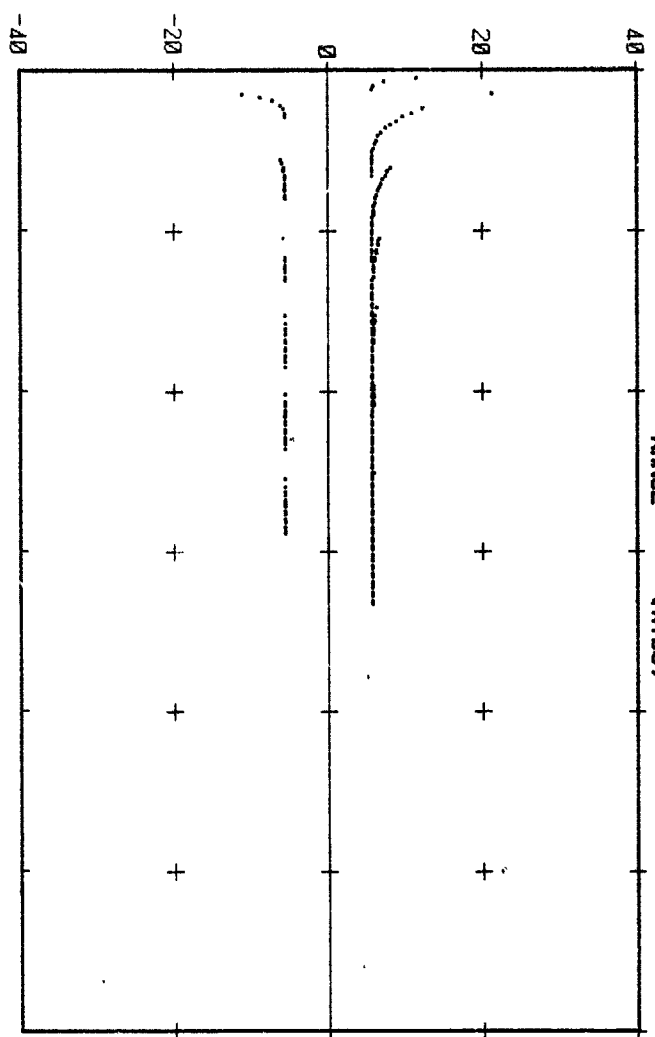
TOTL -27.1 DB

FRER AB SUMMER S 50 R 1500 F 70

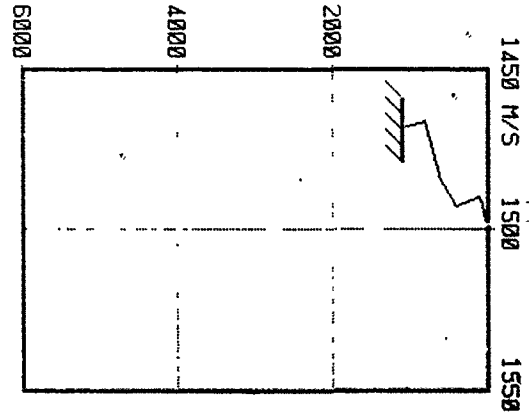
DB LOSS



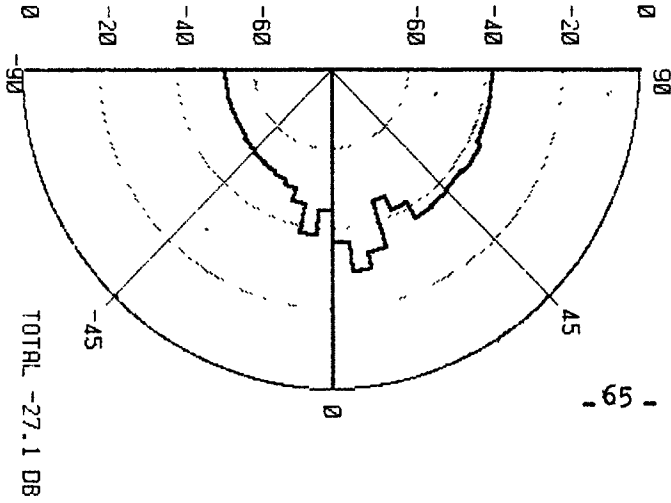
ARRIVAL ANGLE

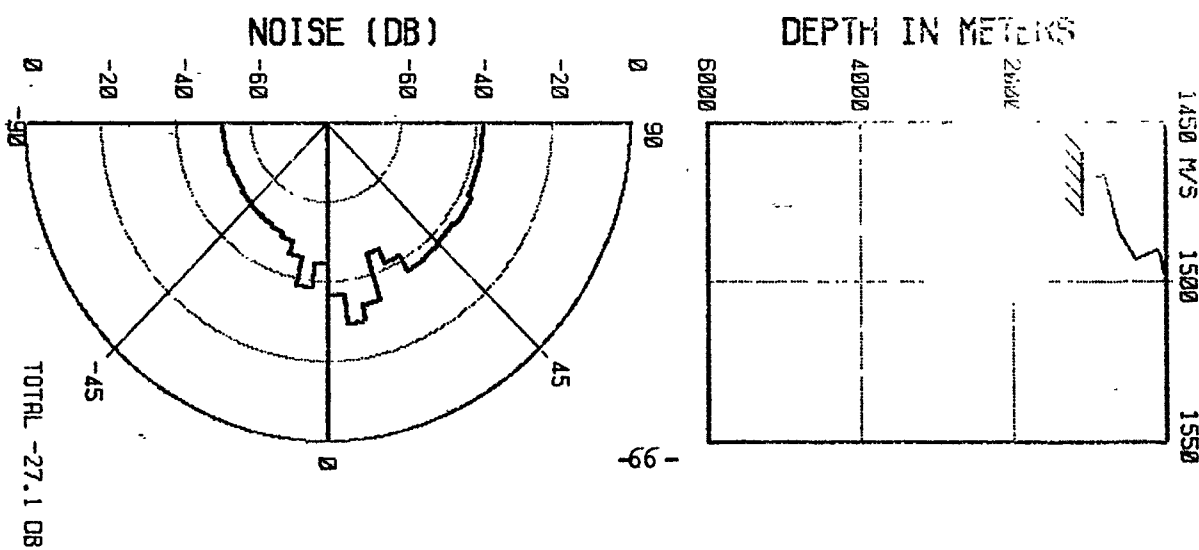
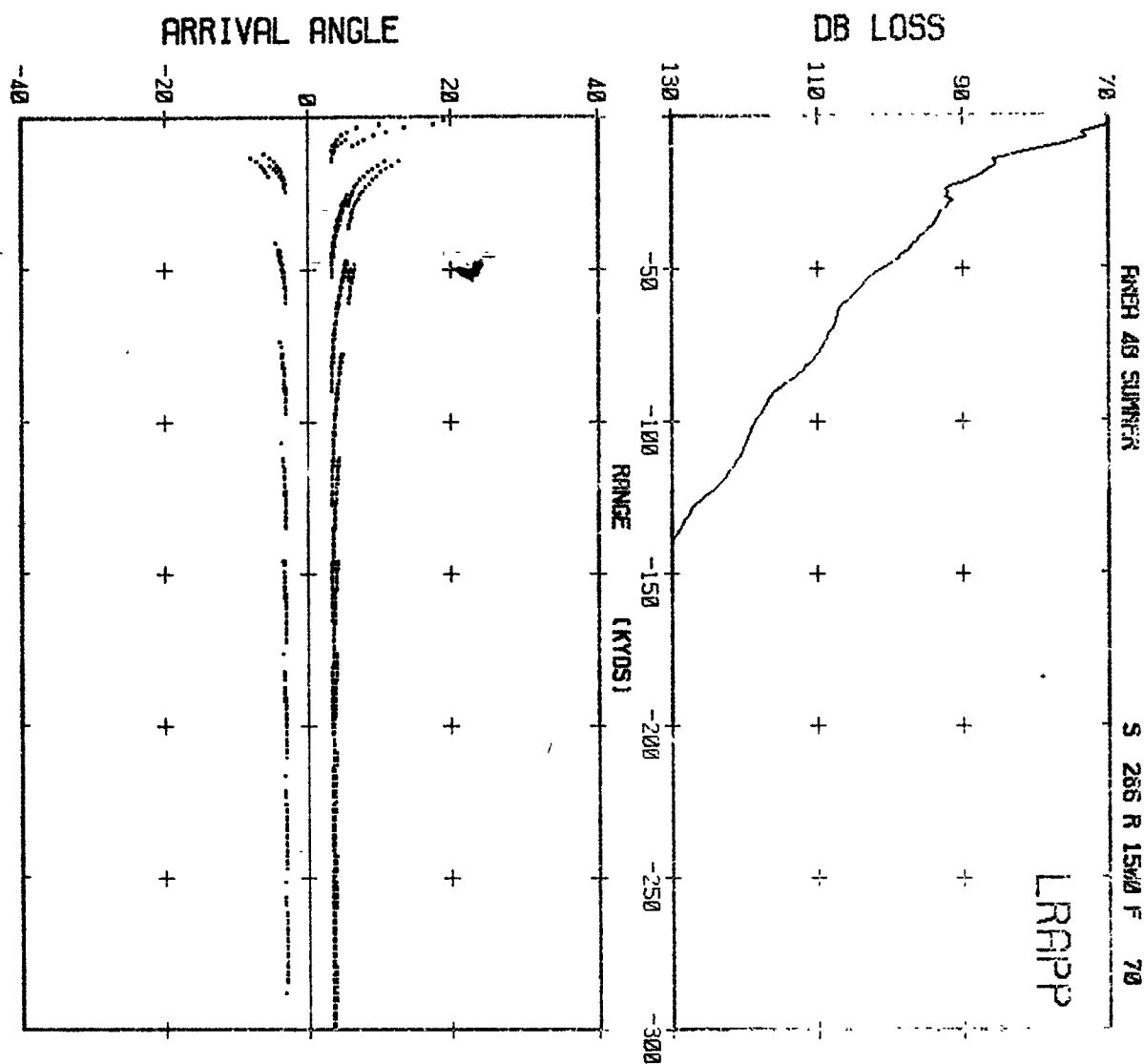


DEPTH IN METERS



NOISE (DB)



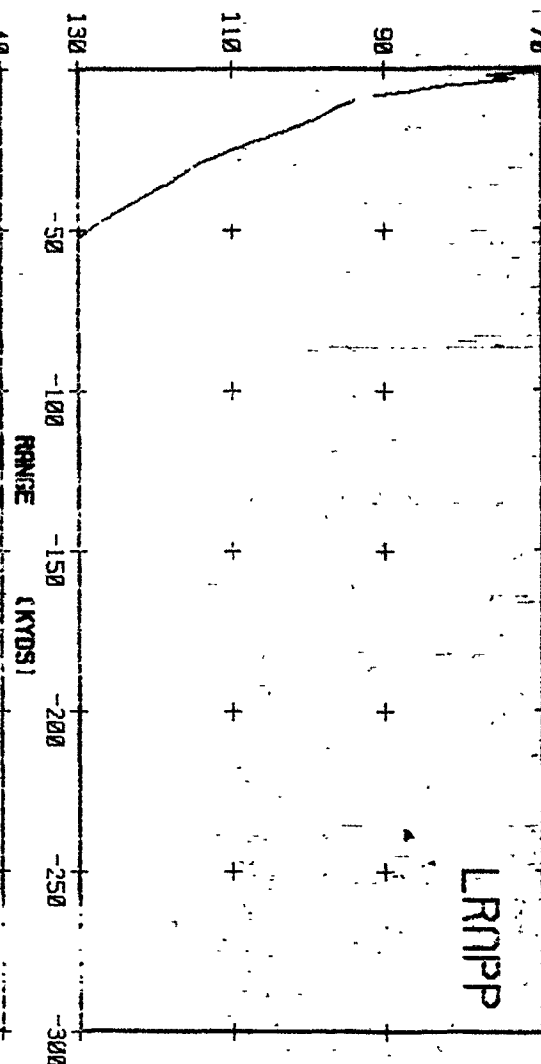


RIVER AB SUMMER

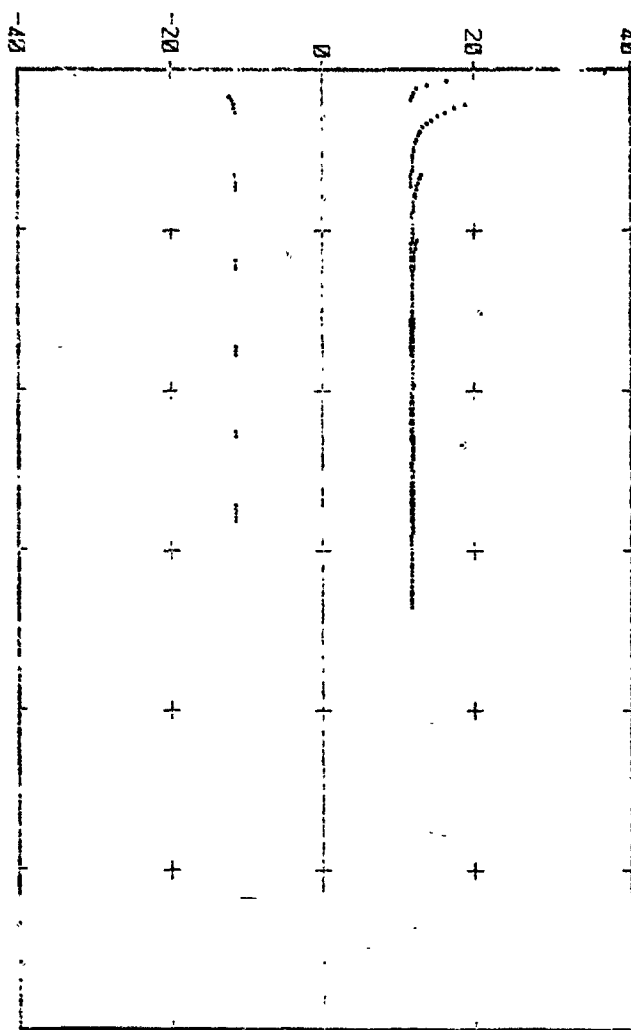
S 20 N 2625 F 78

1450 1455 1500 1550

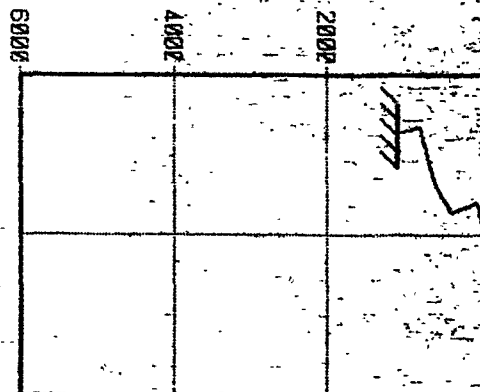
DB LOSS



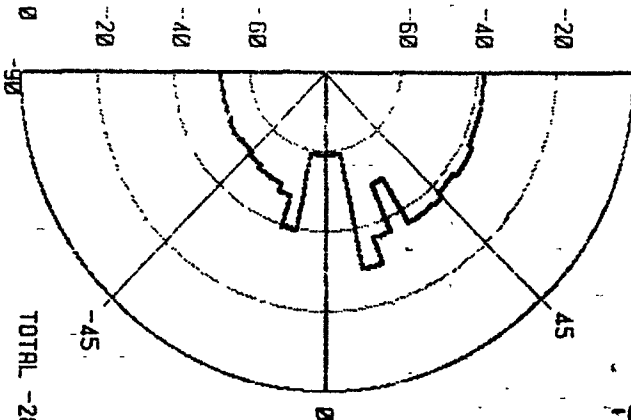
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



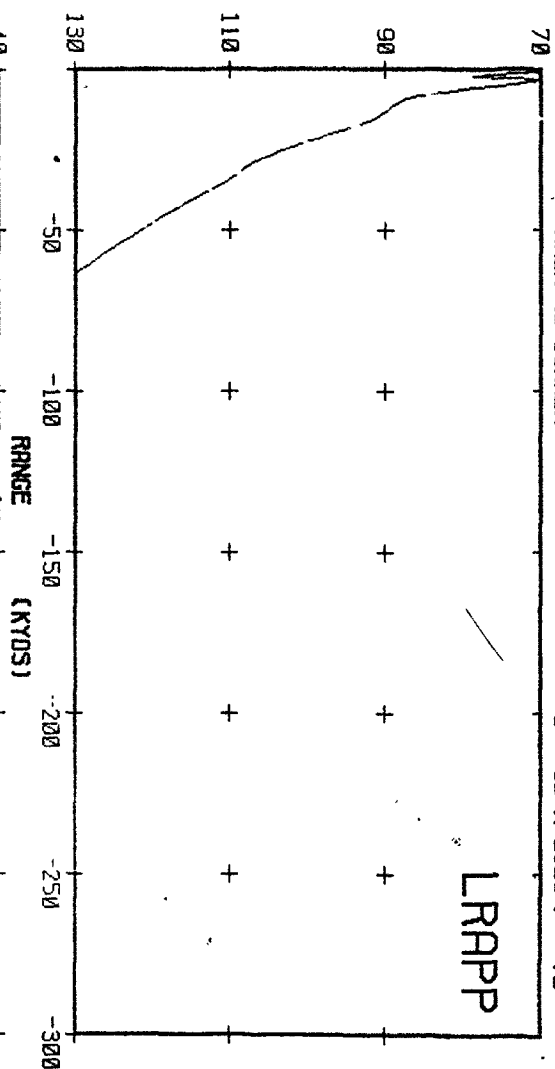
TOTAL -28.3 DB

RRR AB SUMMER

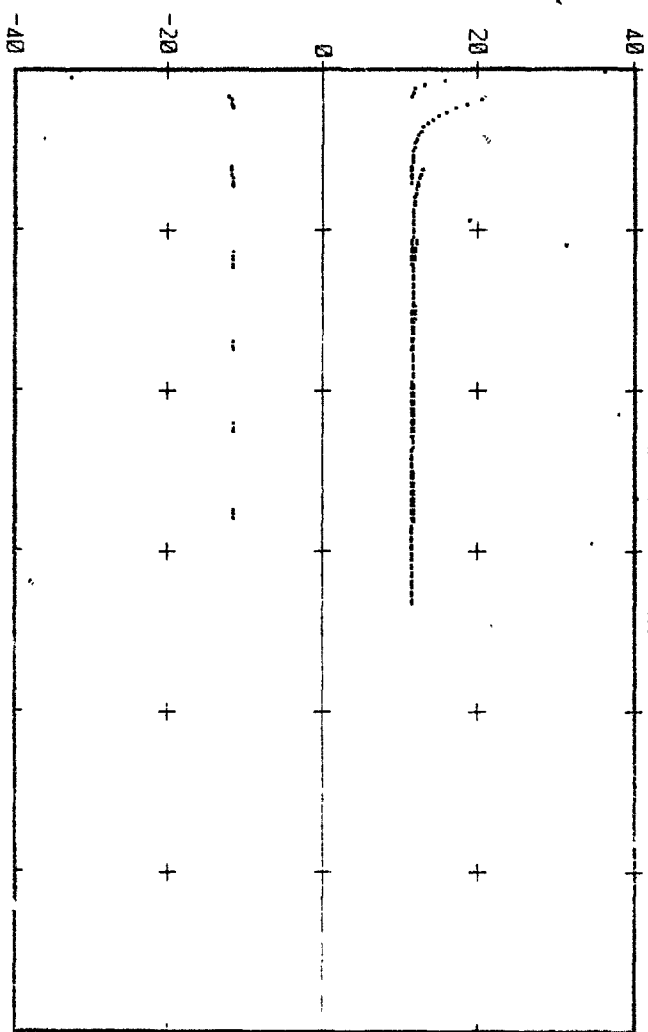
S 50 R 2625 F 70

1450 M/S 1500 1550

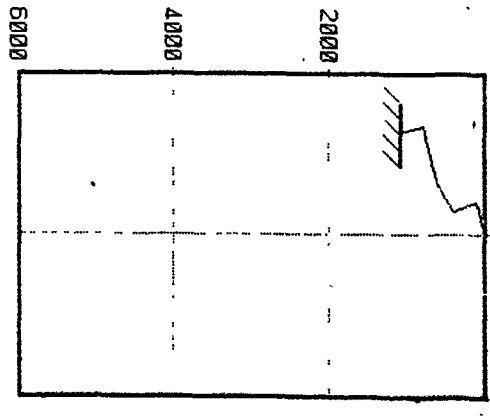
DB LOSS



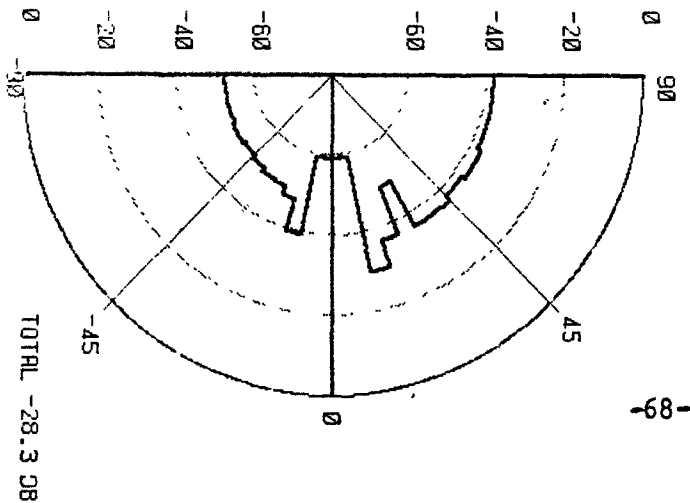
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

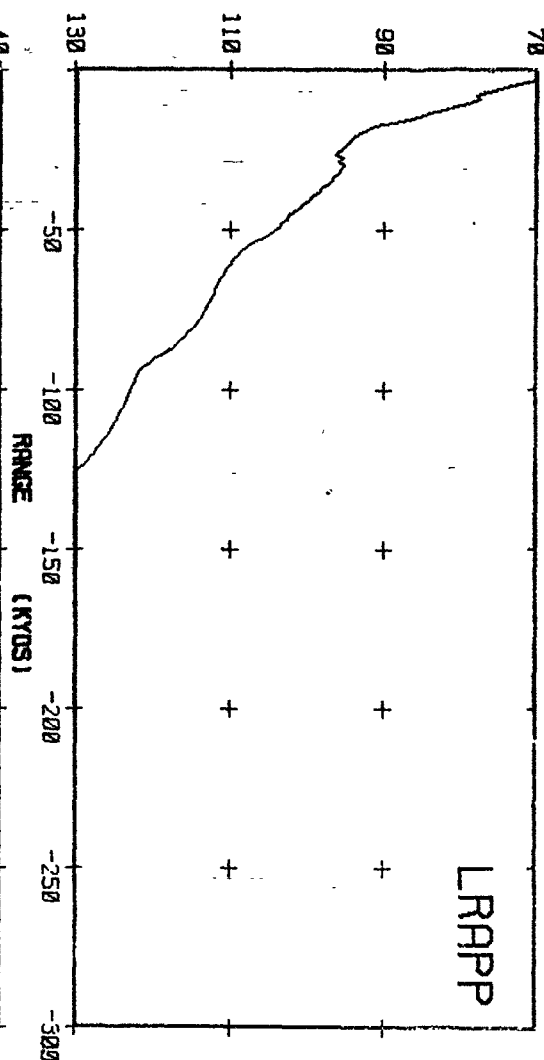


FRER AB SUMMER

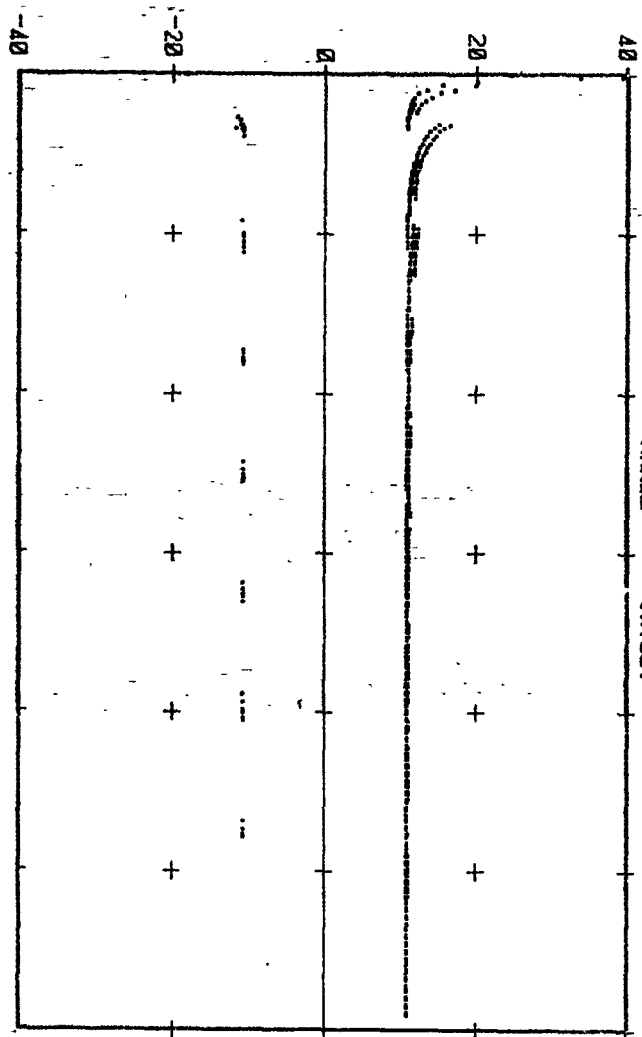
S 266 R 2625 F 70

LRAPP

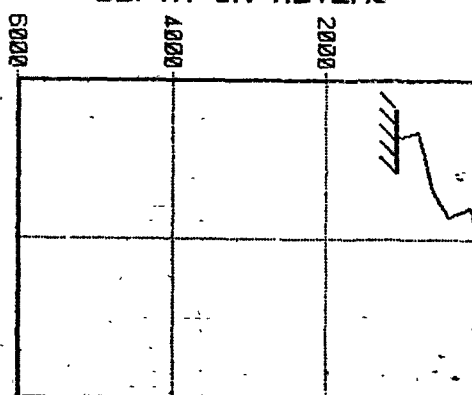
DB LOSS



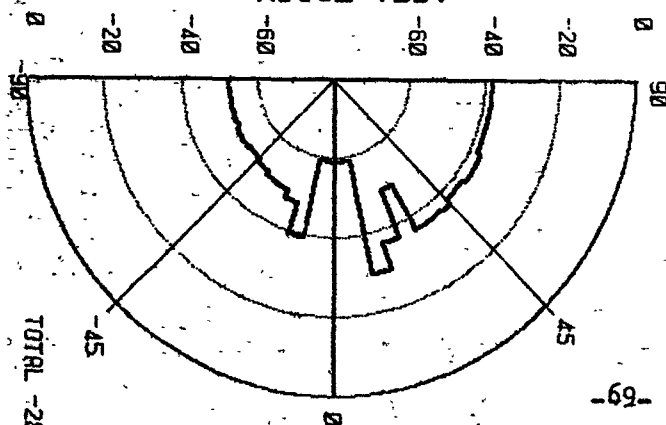
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



TOTAL -28.3 DB

GREEN AIR SINKER

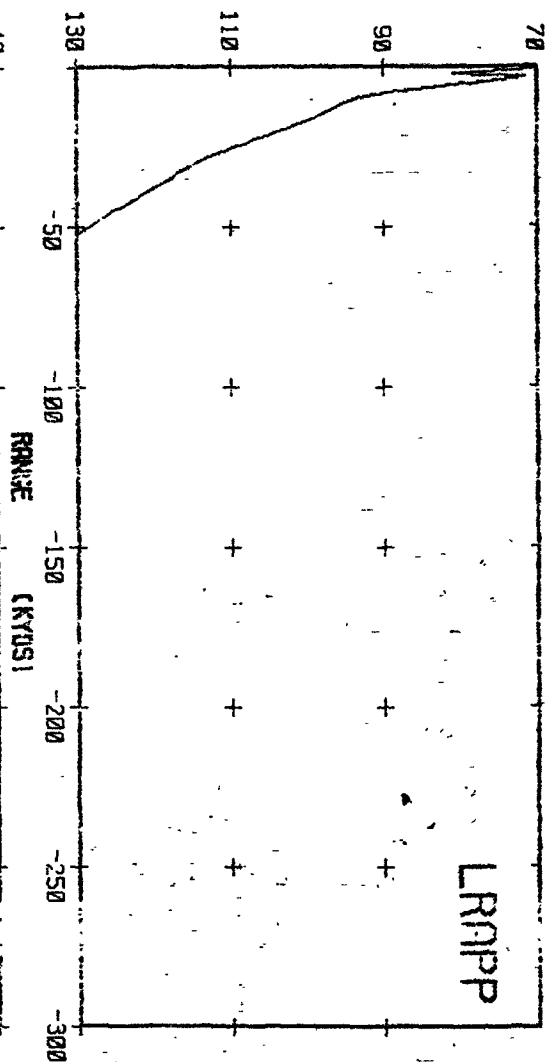
S 28 R 3598 F 70

1450 H45

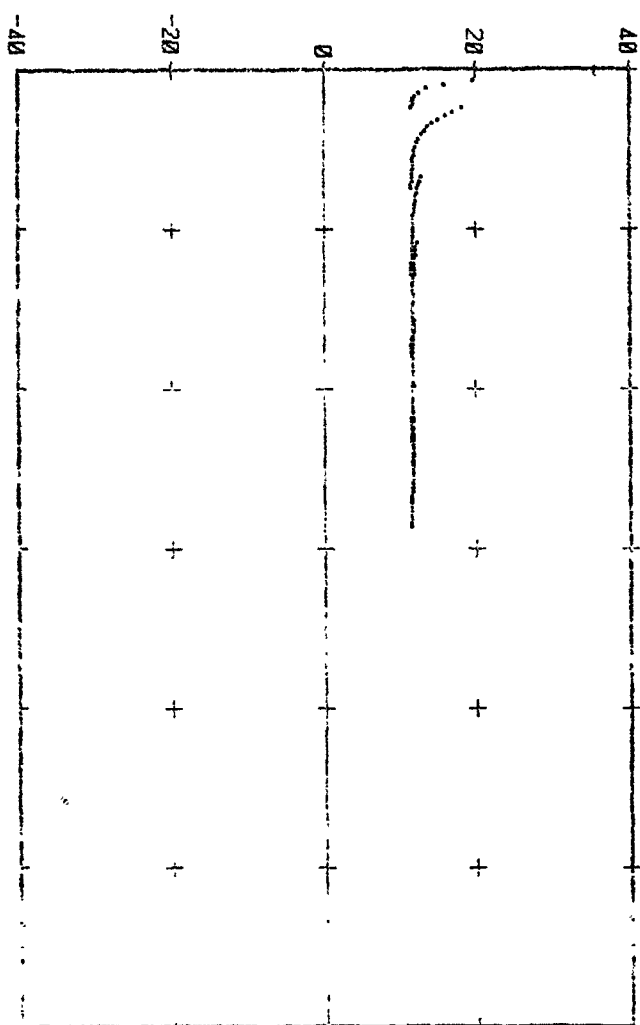
1500

1550

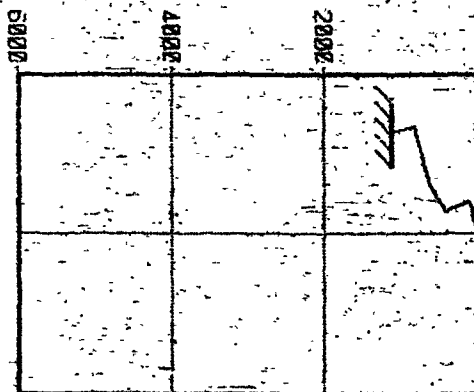
DB LOSS



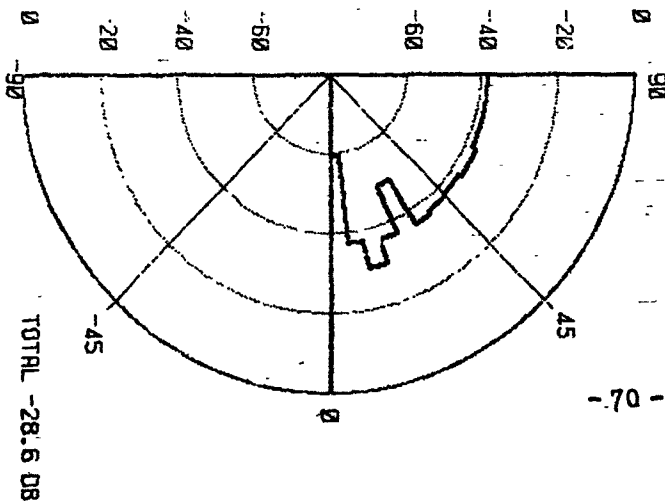
ARRIVAL ANGLE

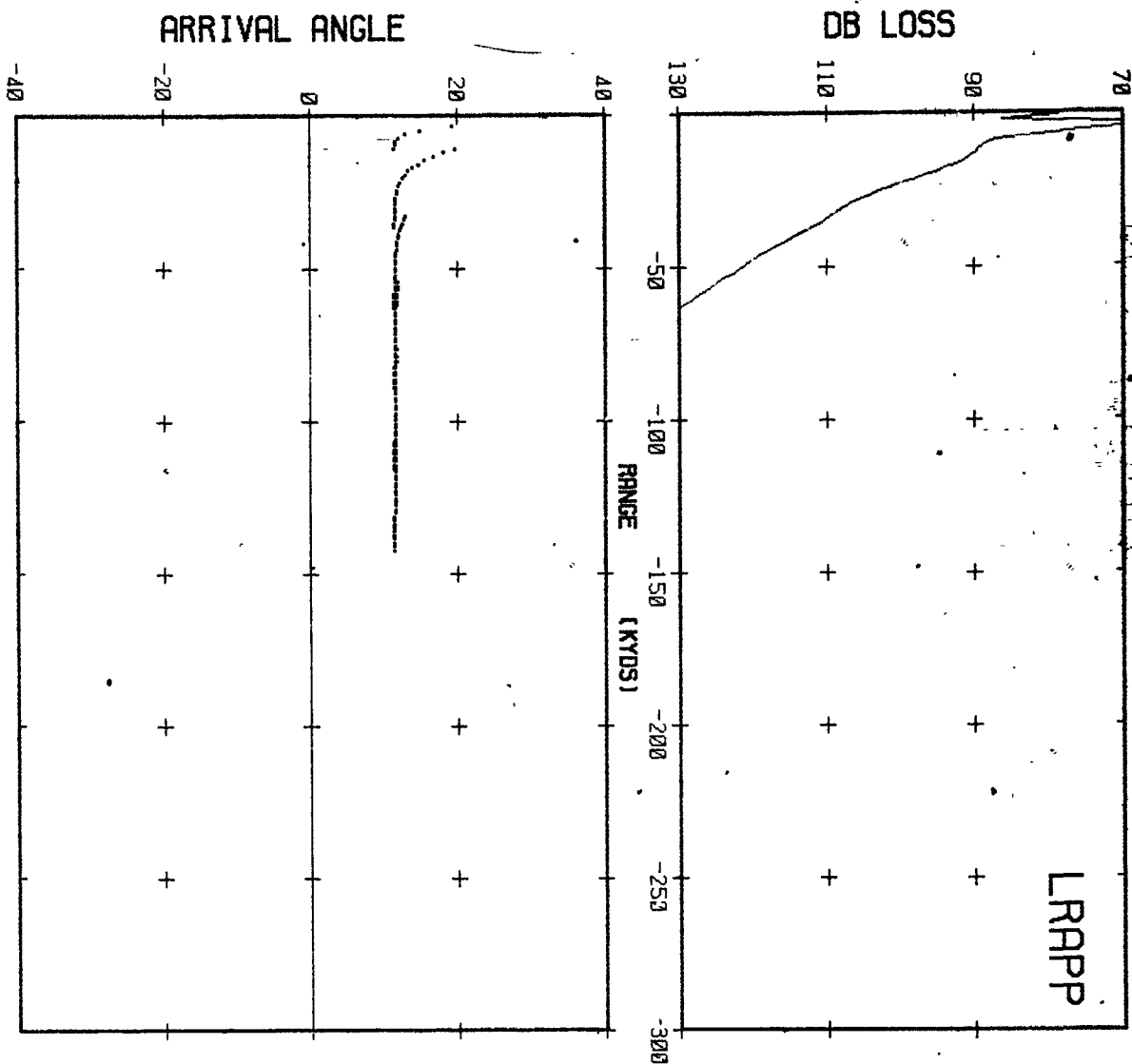


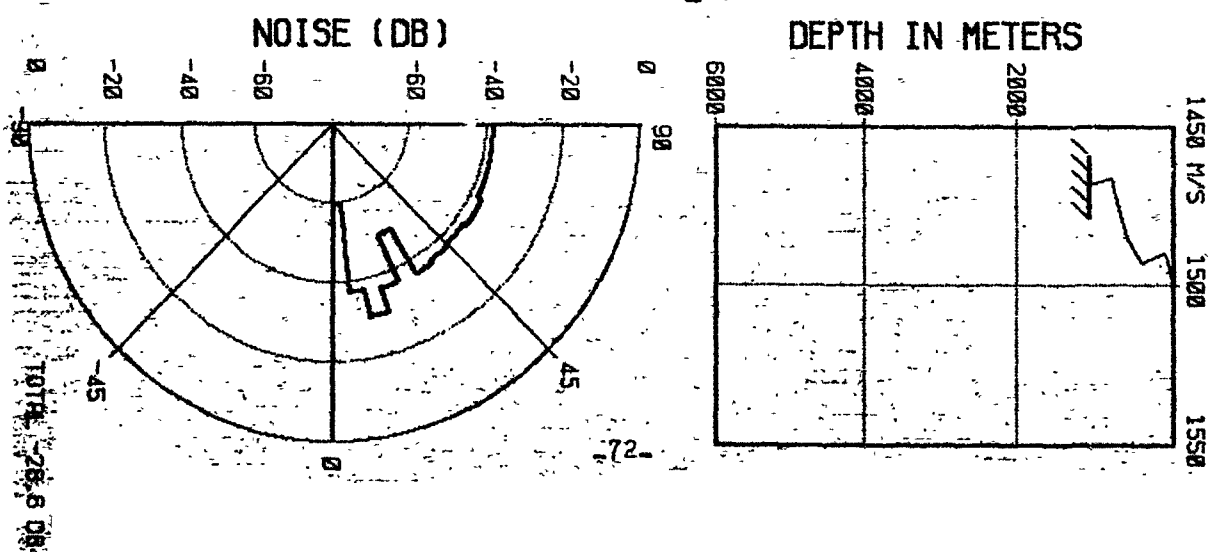
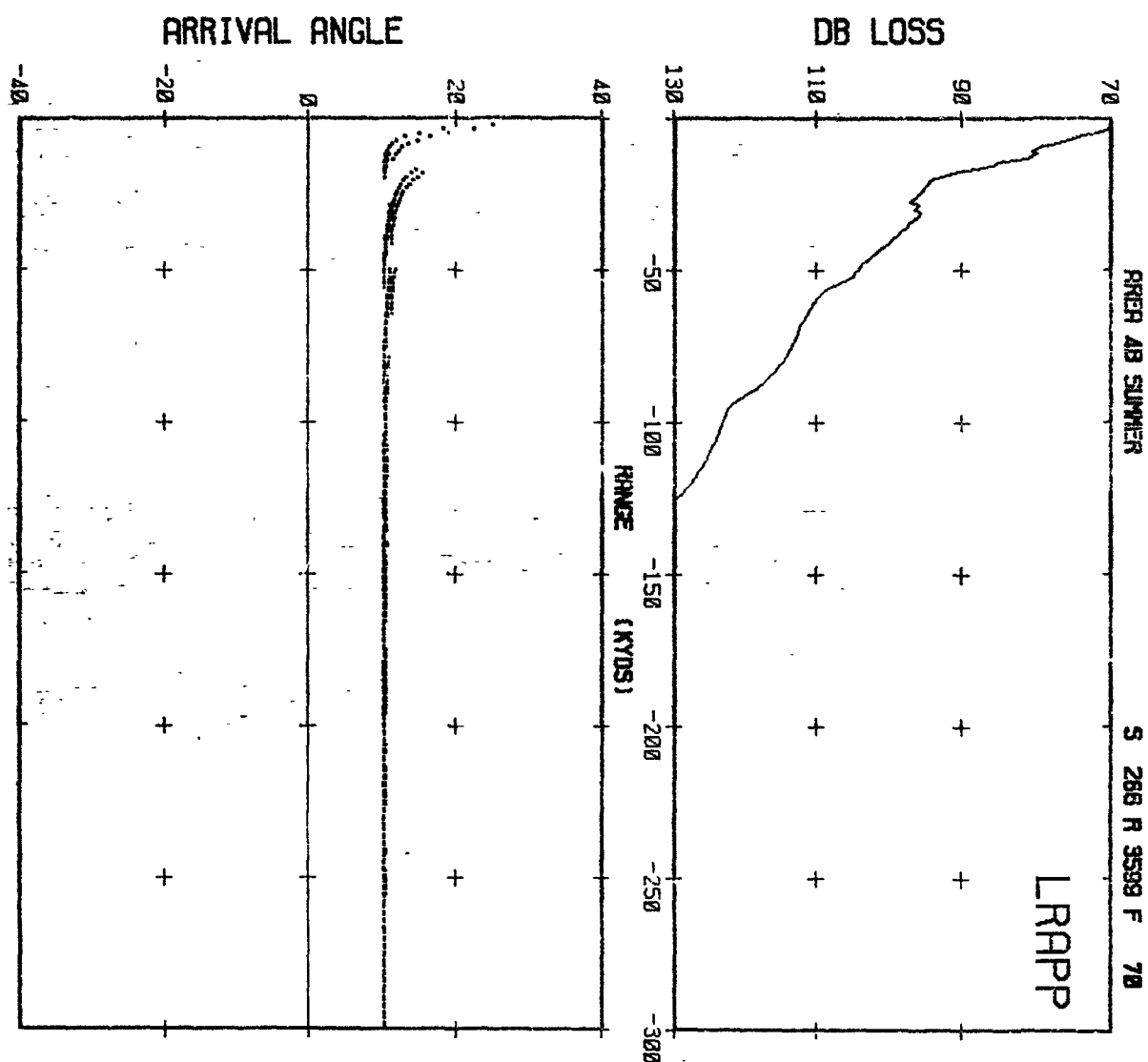
DEPTH IN METERS



NOISE (DB)





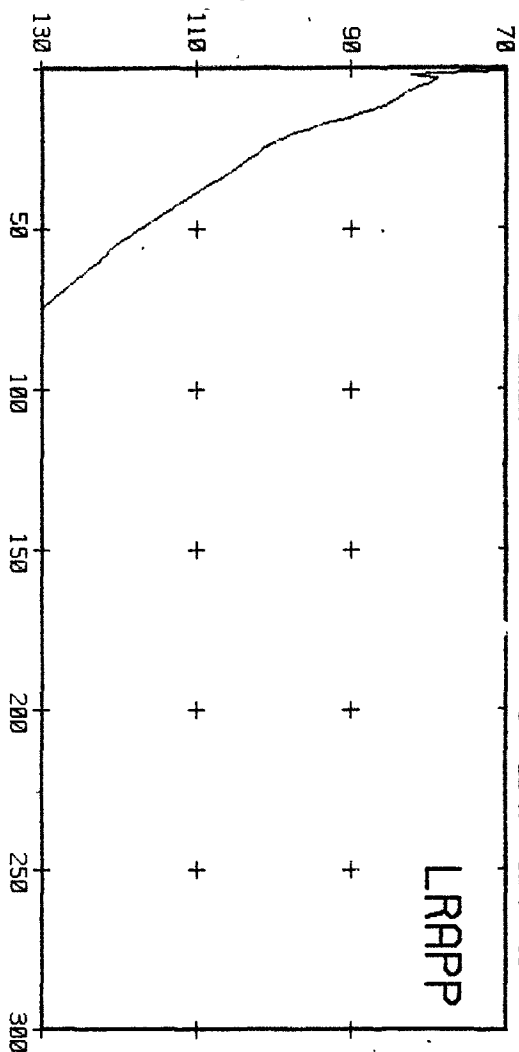


PRER AB SUMMER

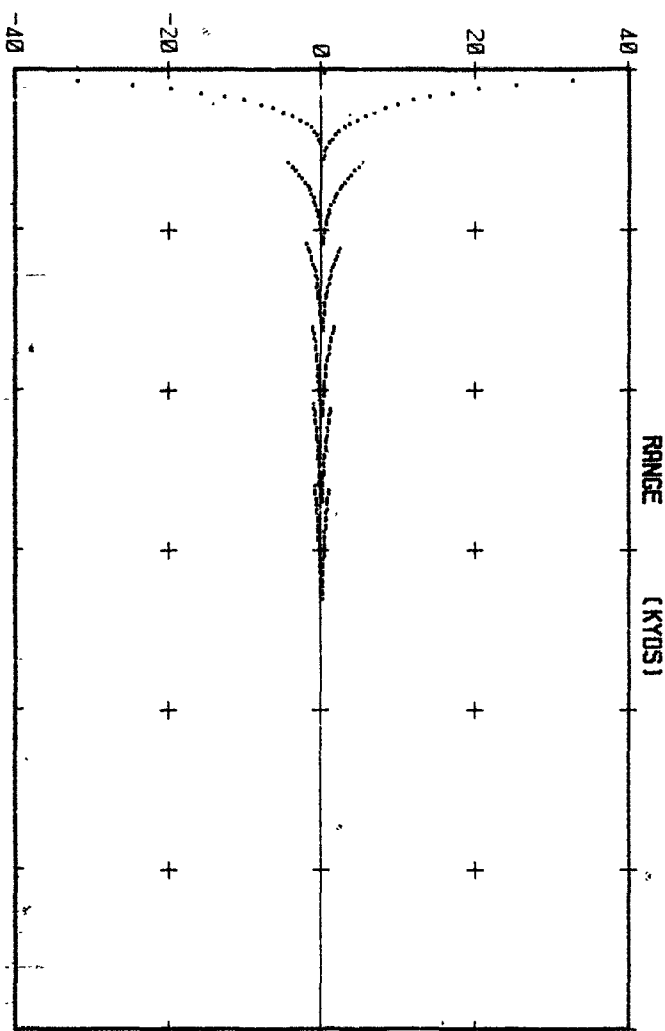
S 20 R 60 F 150

1450 M/S 1500 1550

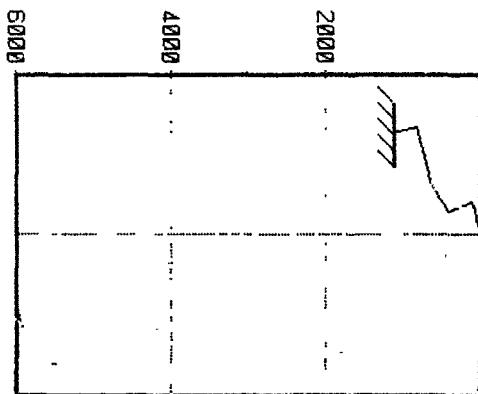
DB LOSS



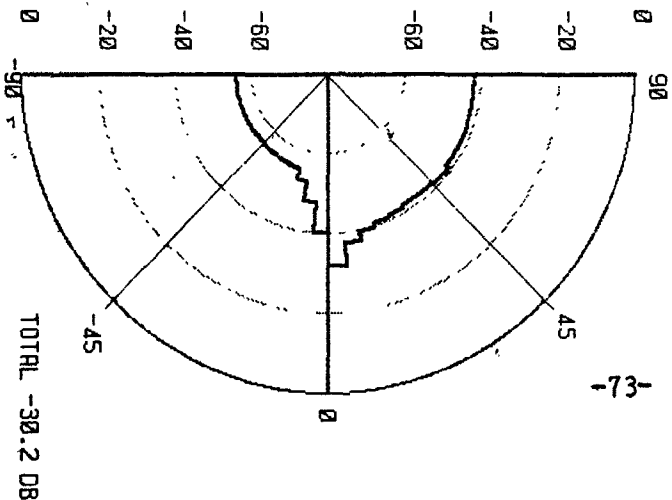
ARRIVAL ANGLE

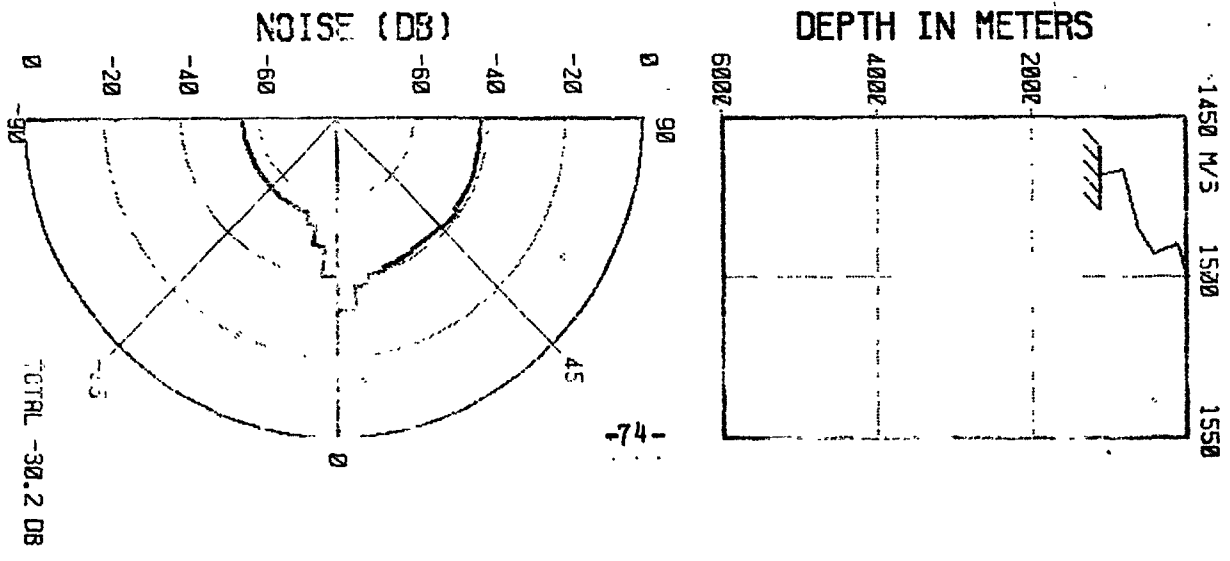
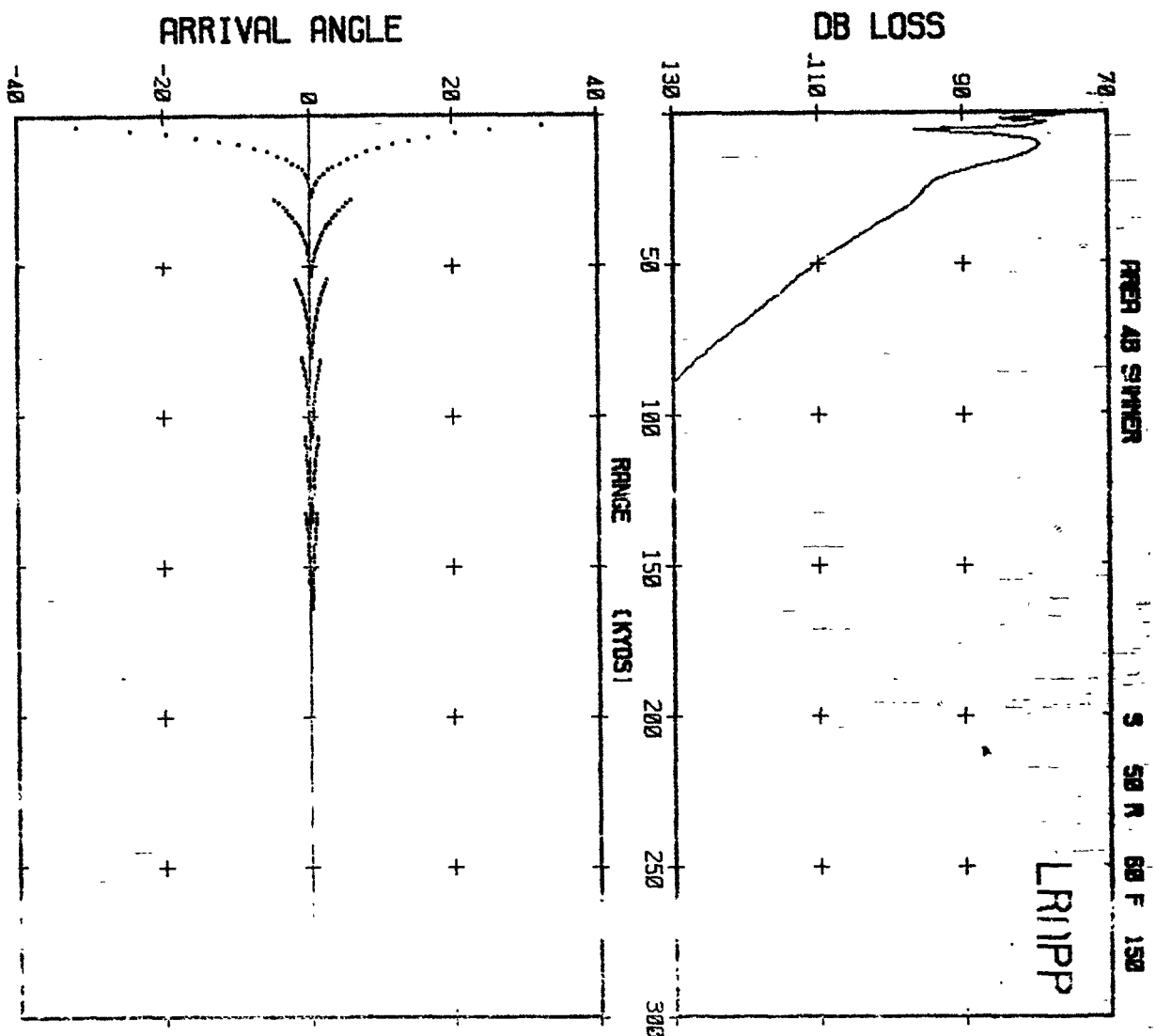


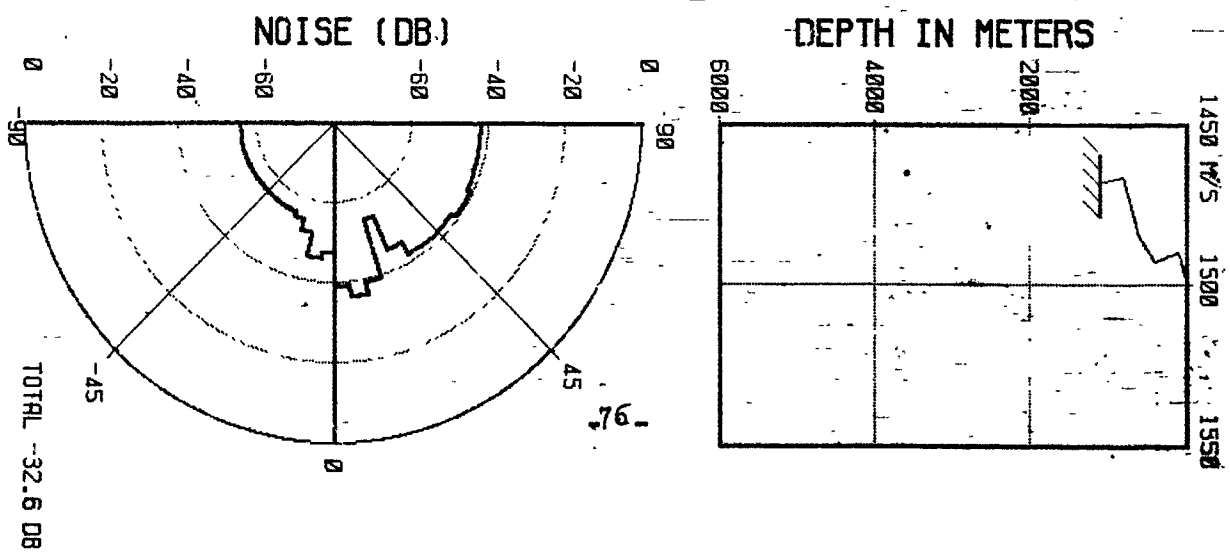
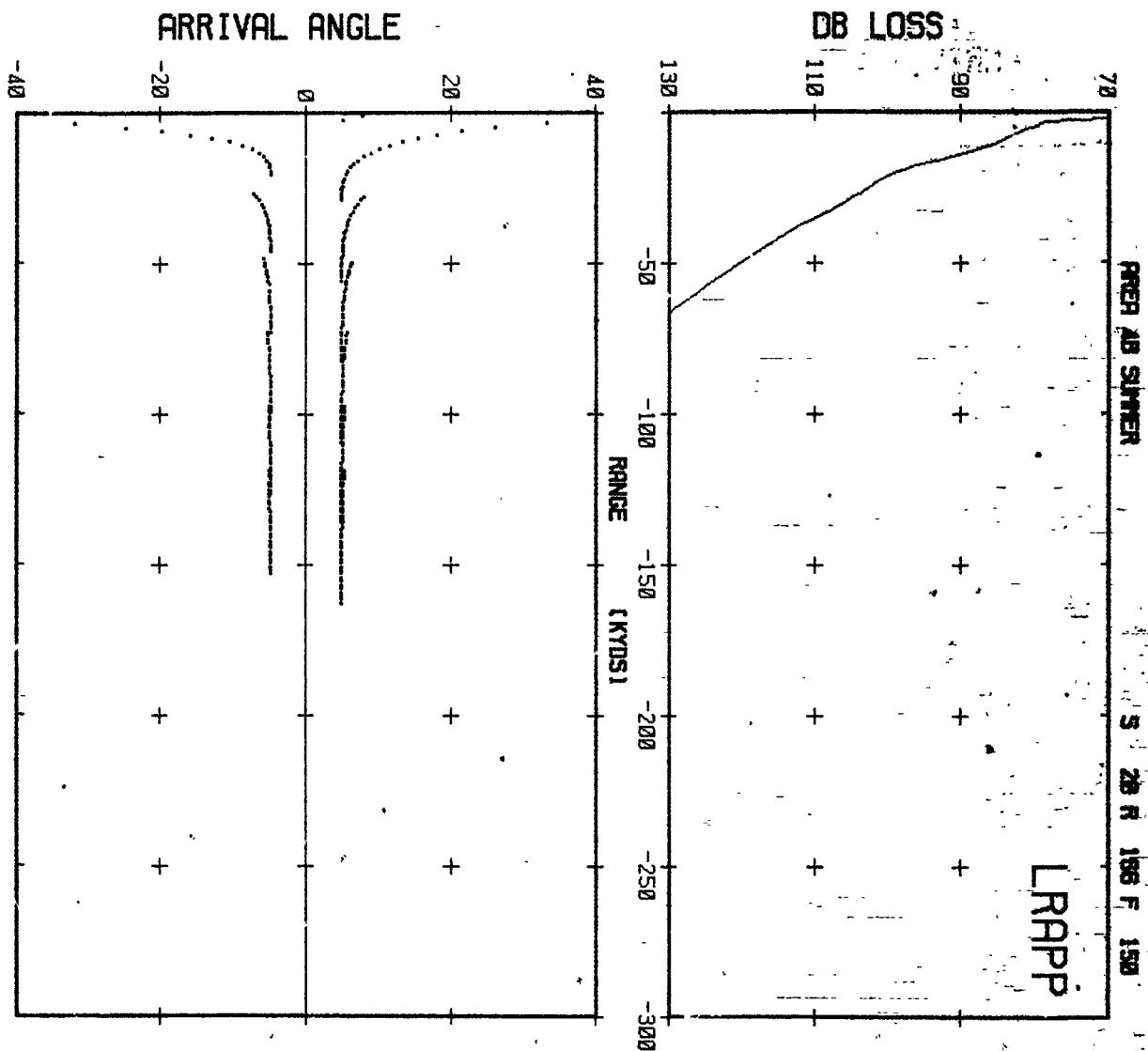
DEPTH IN METERS



NOISE (DB)





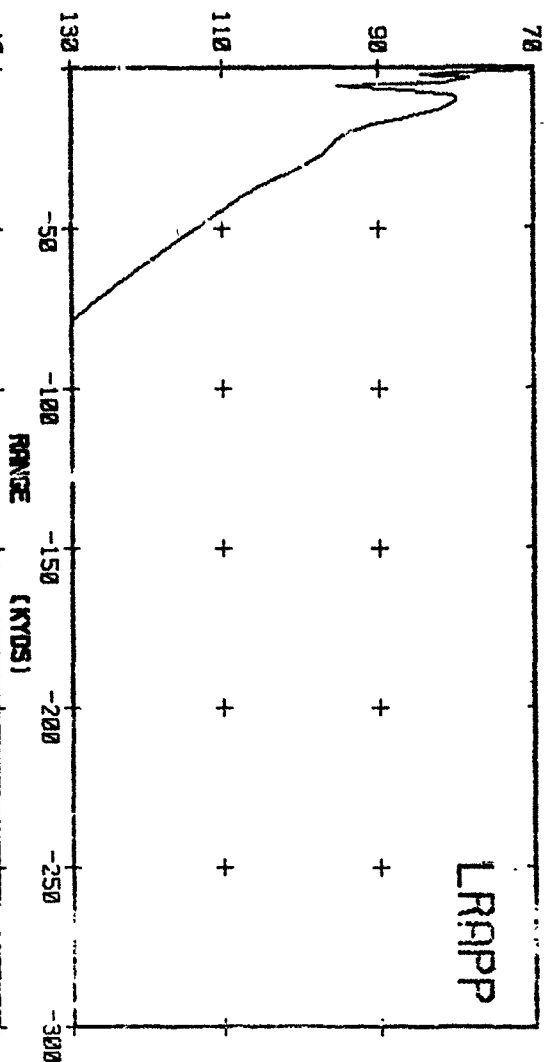


RIVER AB SUMMER

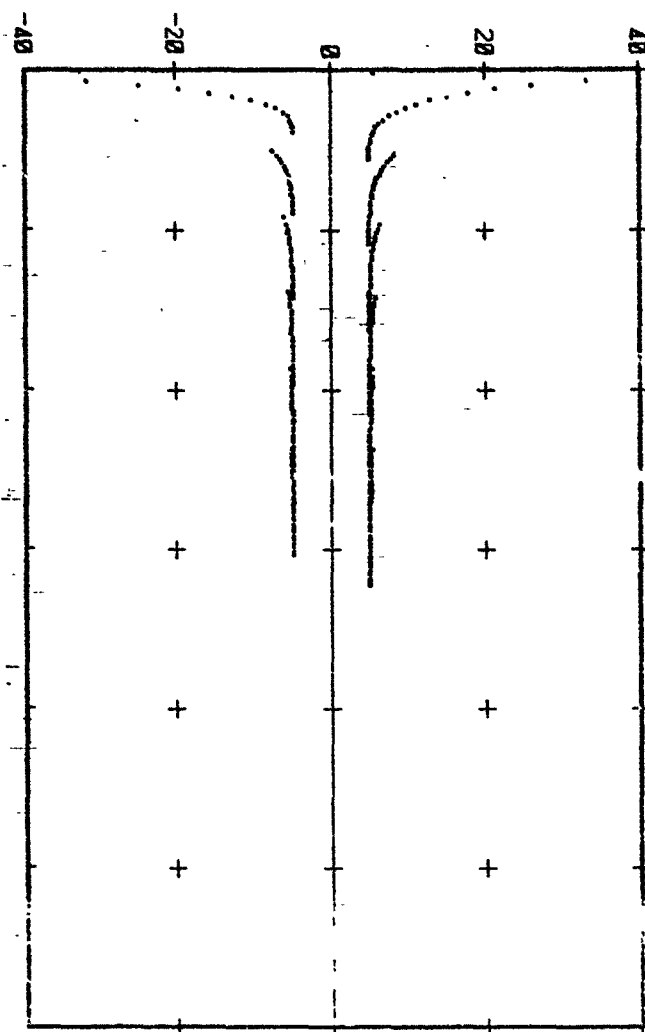
S 50 R 100 F 150

LRAPP

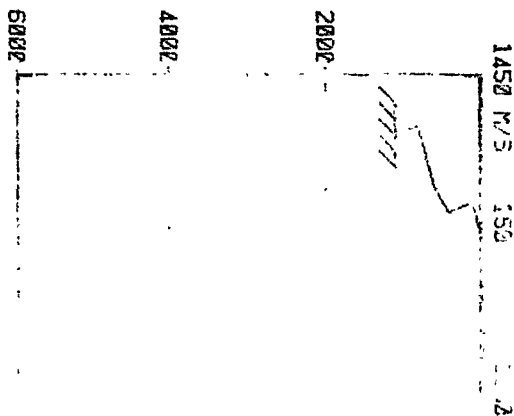
DB LOSS



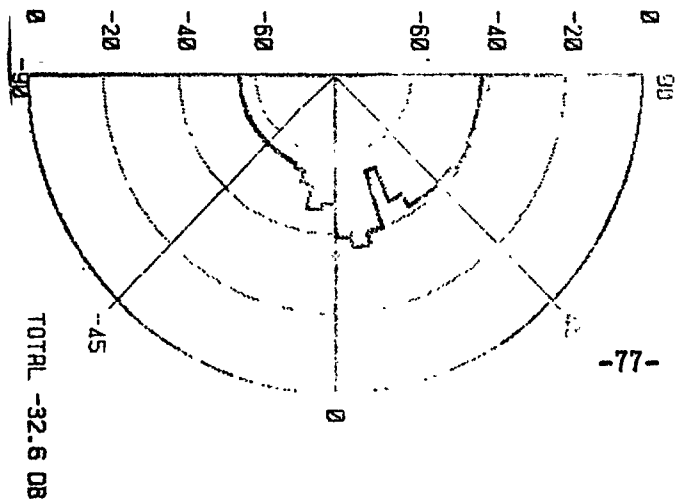
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



-77-

TOTAL -32.6 DB

AREA 4B SUMMER

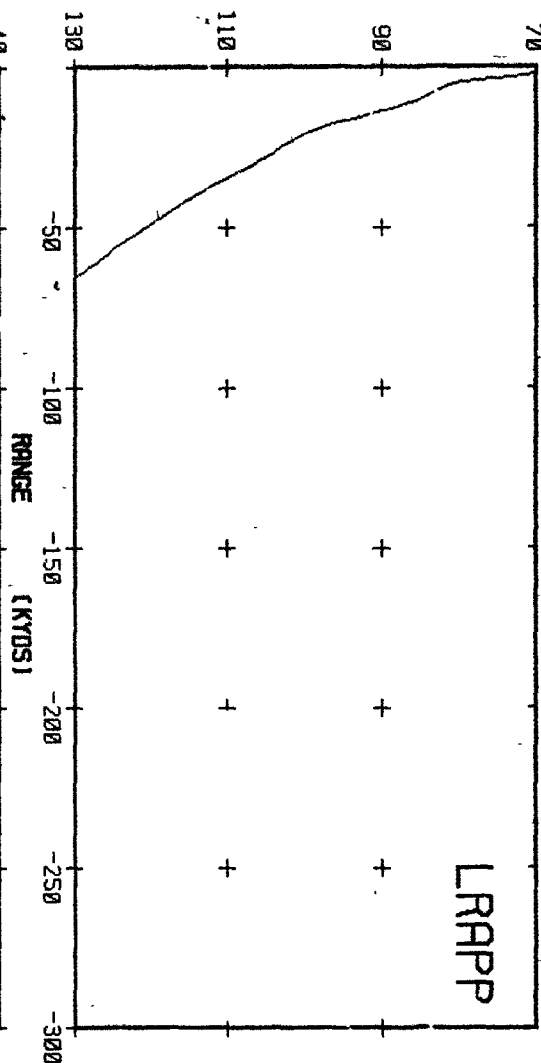
S 20 R 300 F 150

1450 M/S

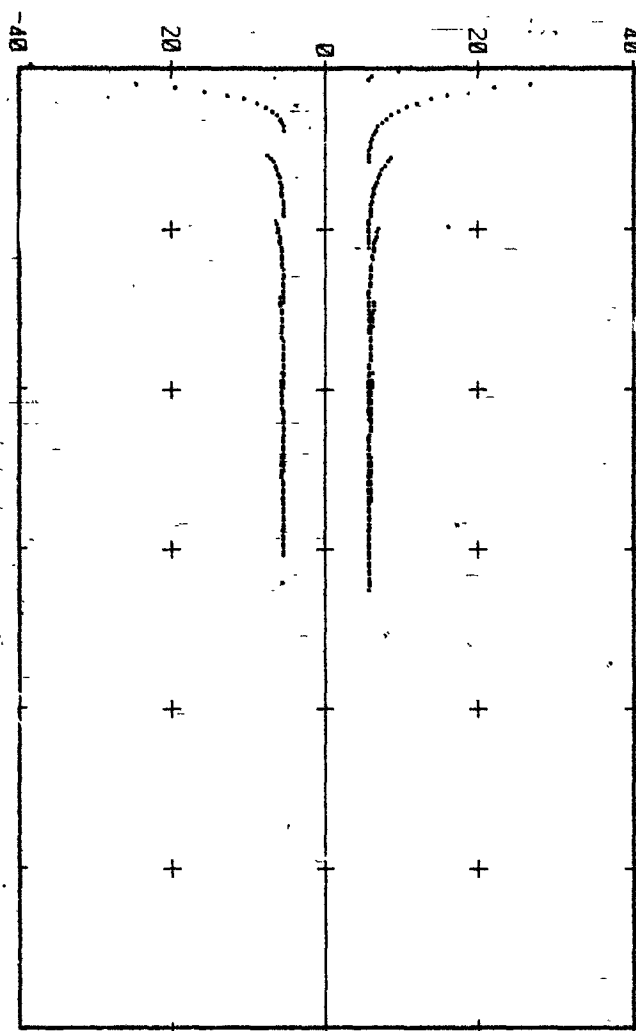
1500

1550

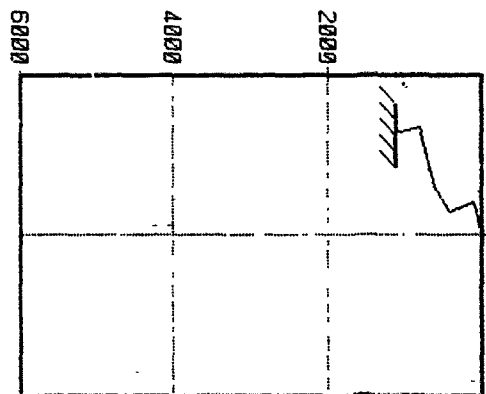
DB LOSS



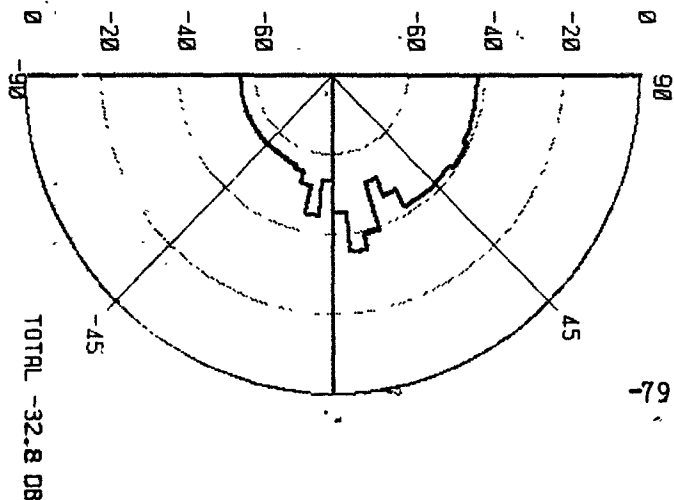
ARRIVAL ANGLE

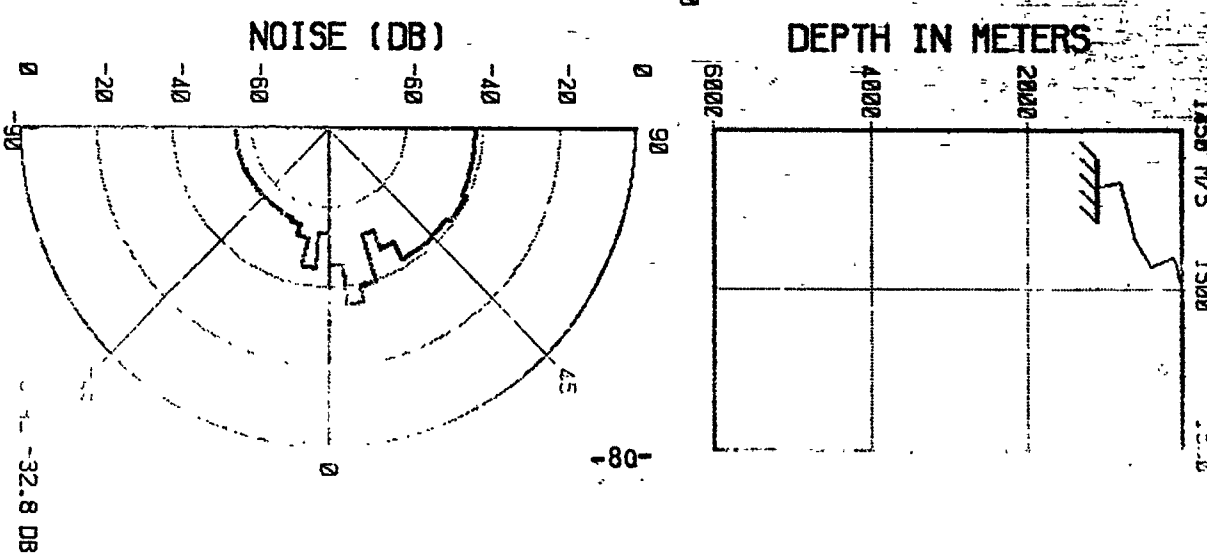
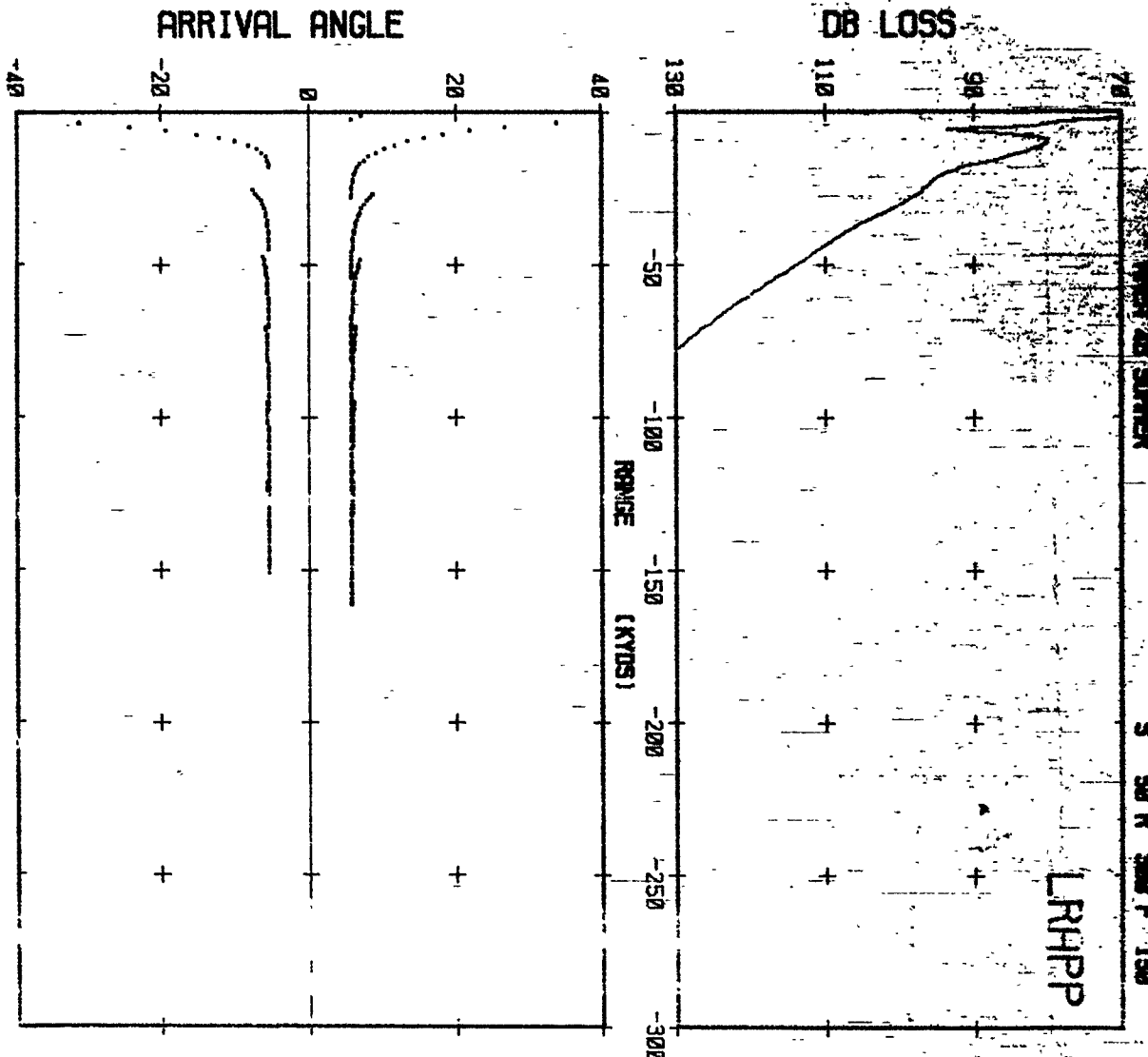


DEPTH IN METERS



NOISE (DB)





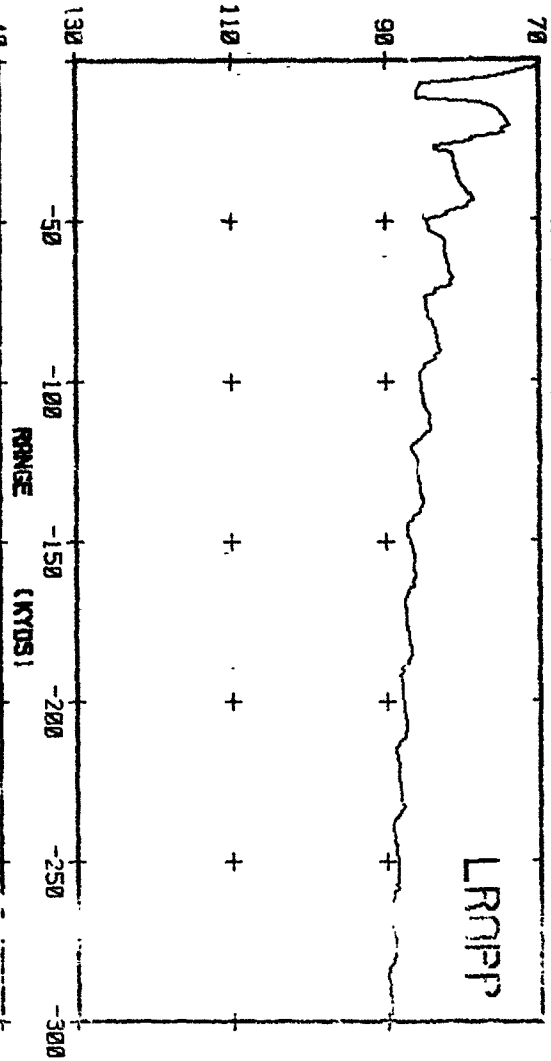
RECH AB SUMMER

S 200 R 300 F 150

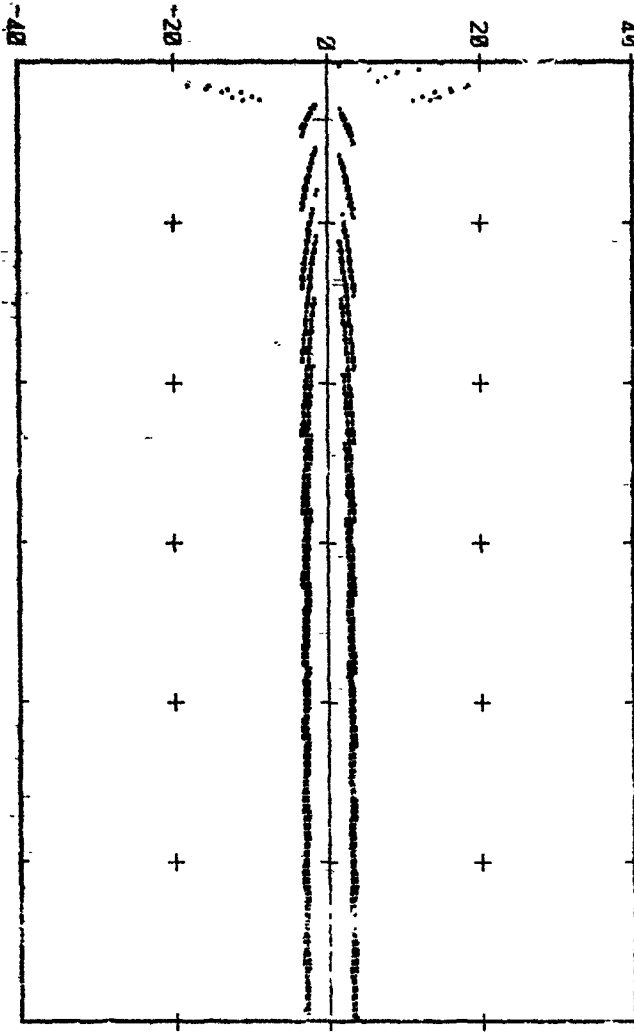
1450 M/S 1526

1510

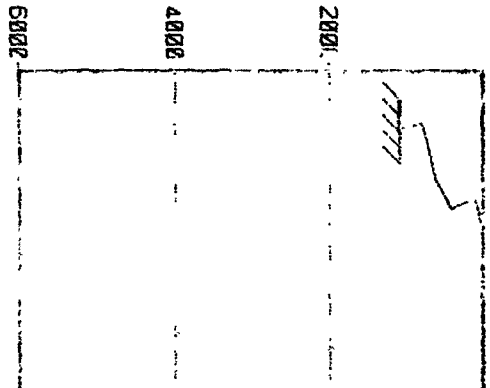
DB LOSS



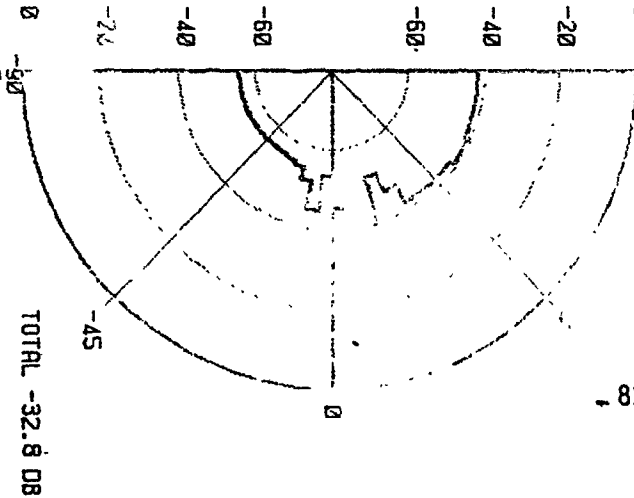
ARRIVAL ANGLE



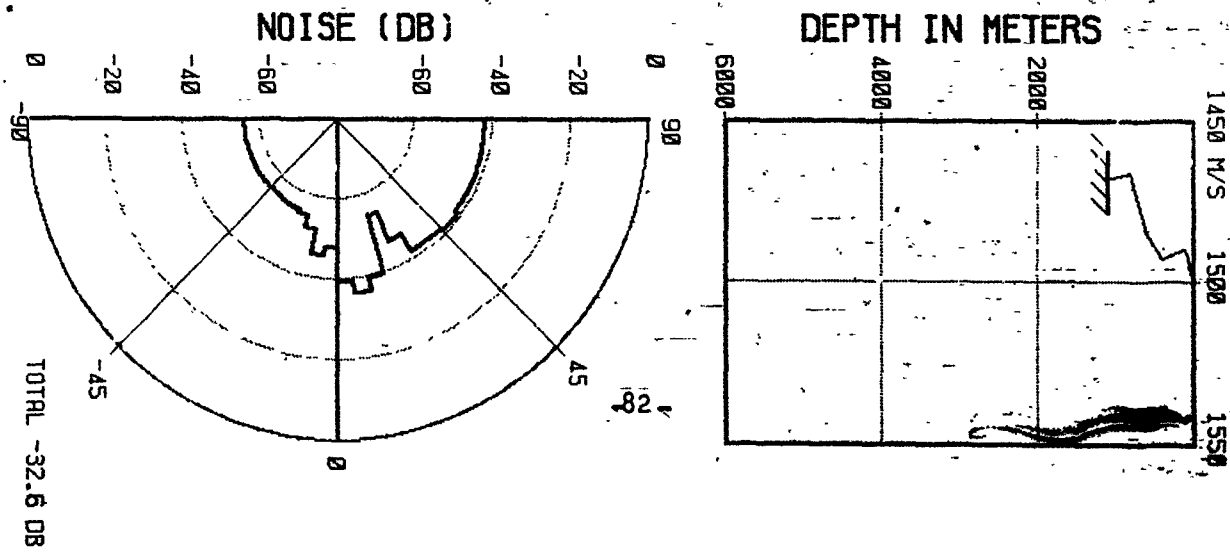
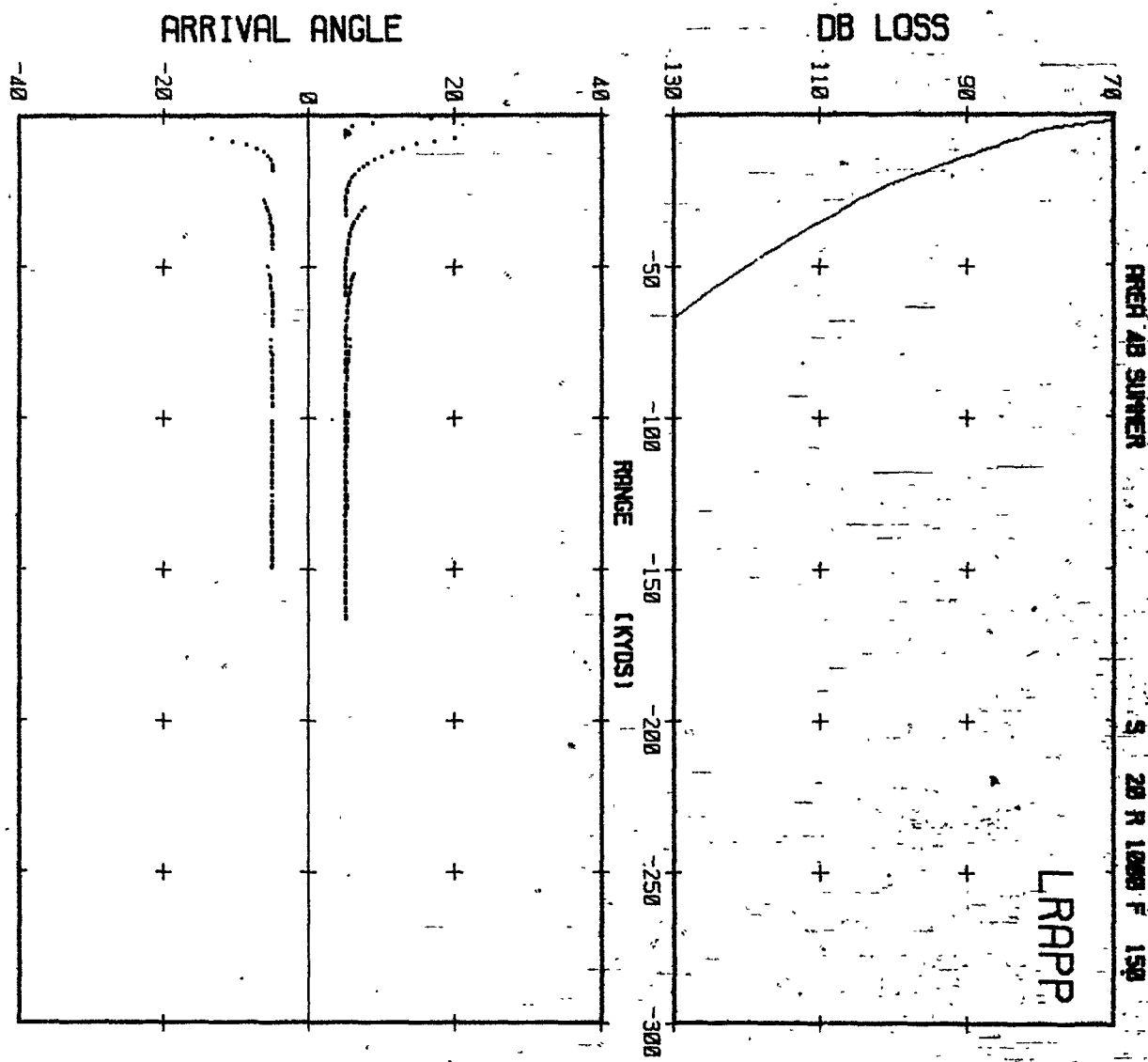
DEPTH IN METERS



NOISE (DB)



TOTAL -32.8 DB

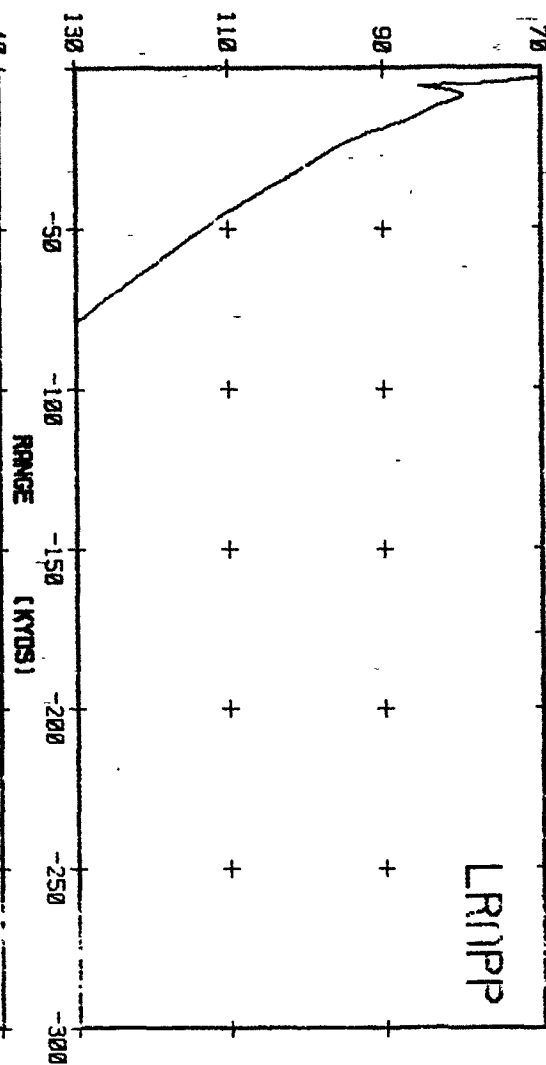


AREA AB SUMMER

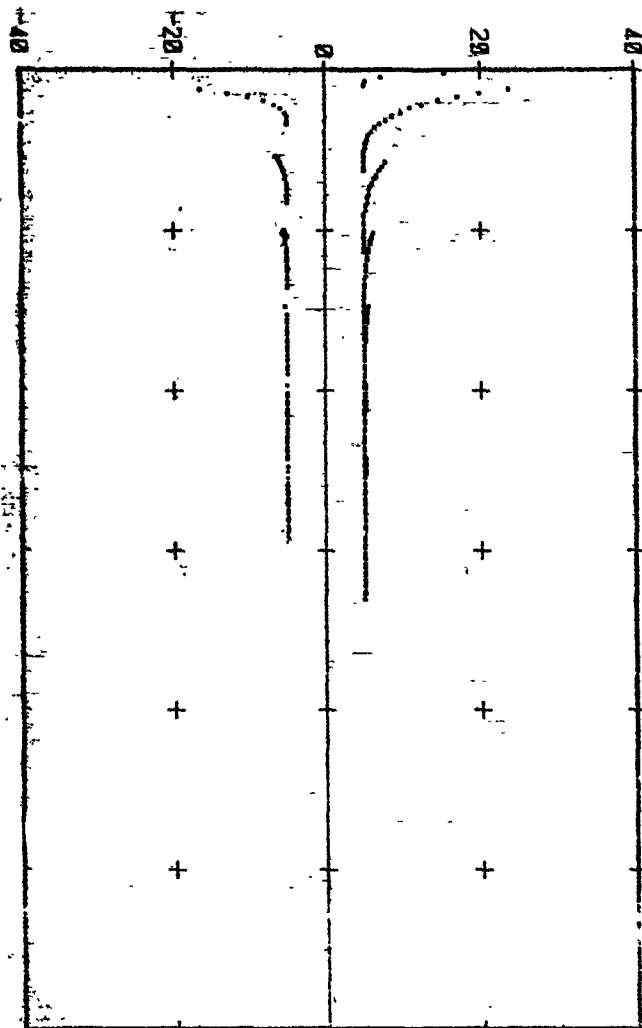
S 50 R 1000 F 150

LR11PP

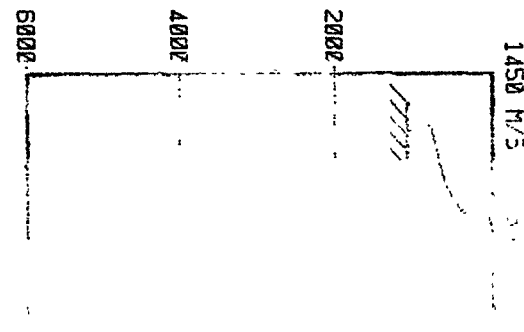
DB LOSS



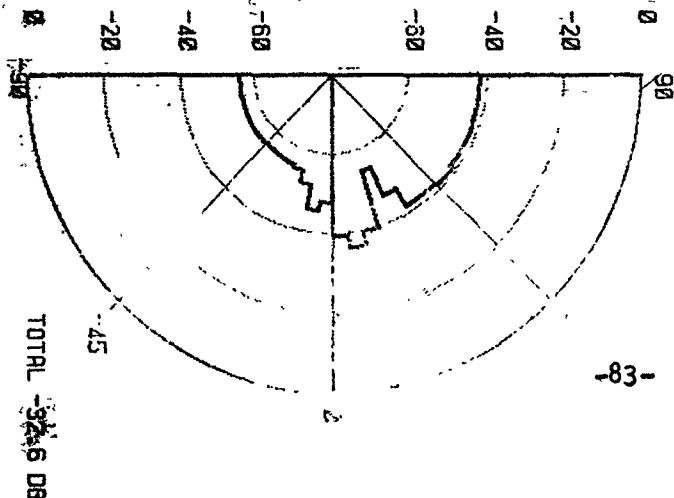
ARRIVAL ANGLE



DEPTH IN METERS

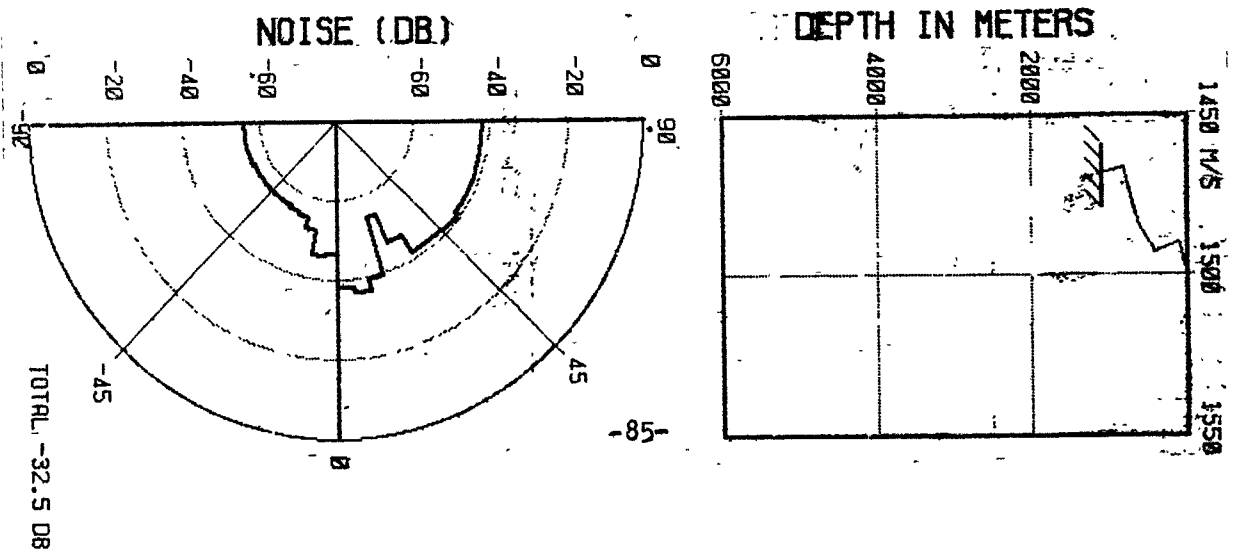
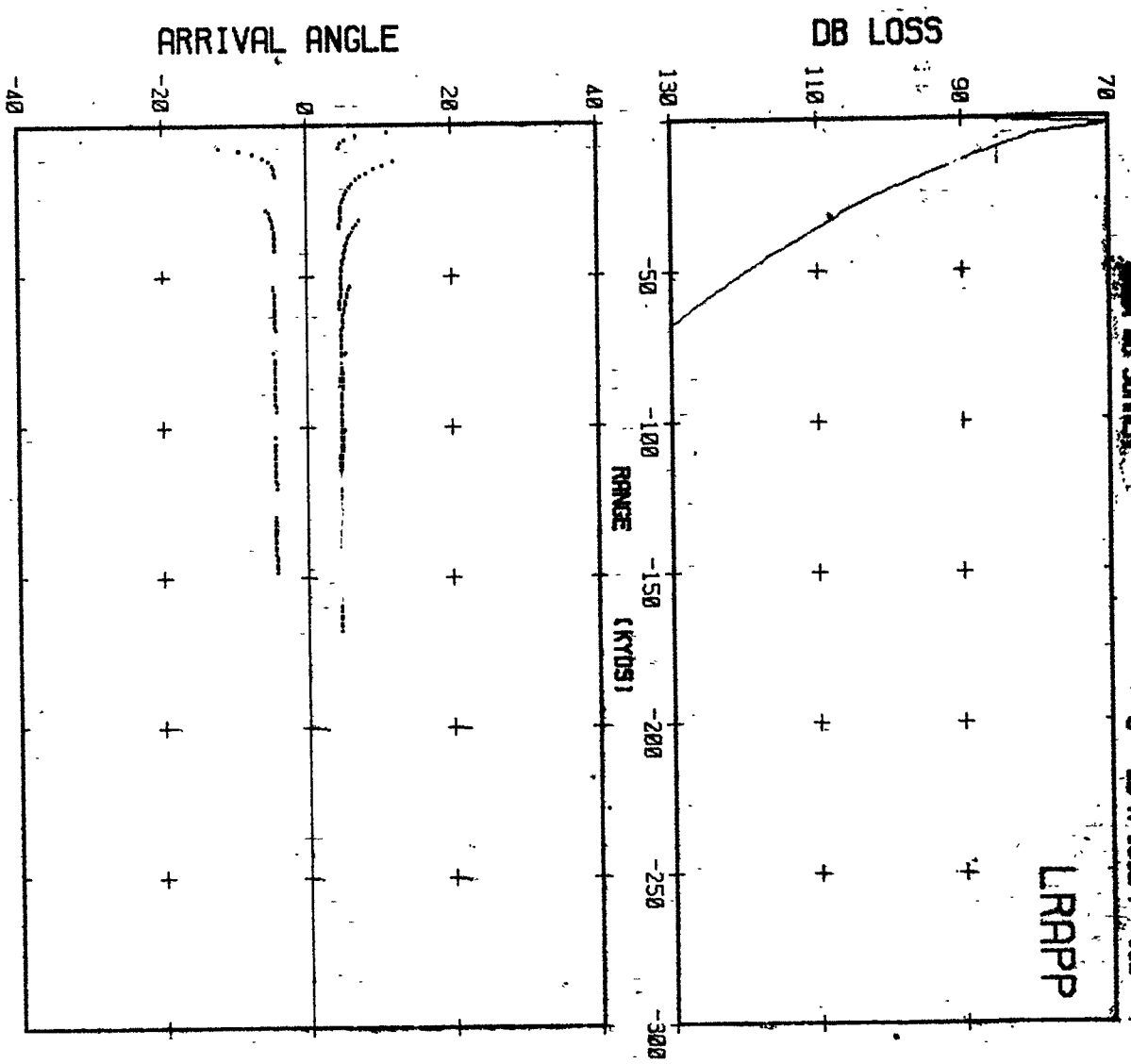


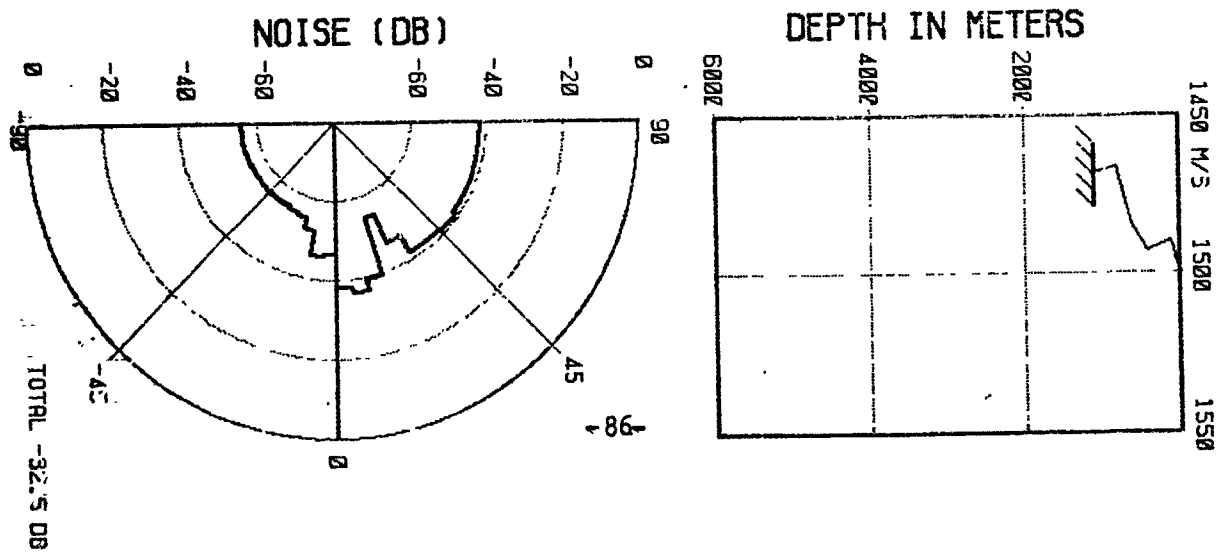
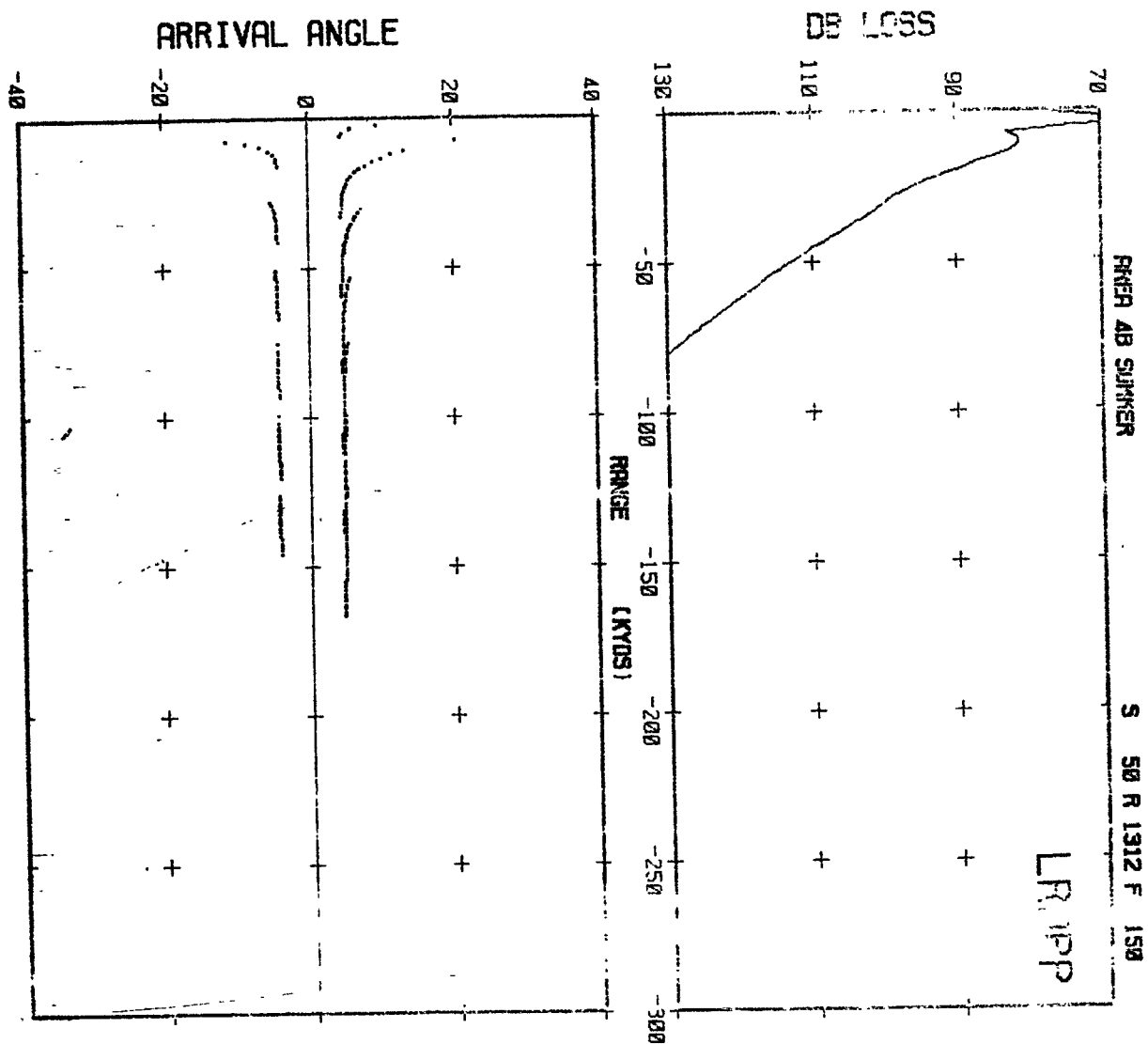
NOISE (DB)



TOTAL -32.6 DB

0800 AB SURF S 20 N 1912 F 150



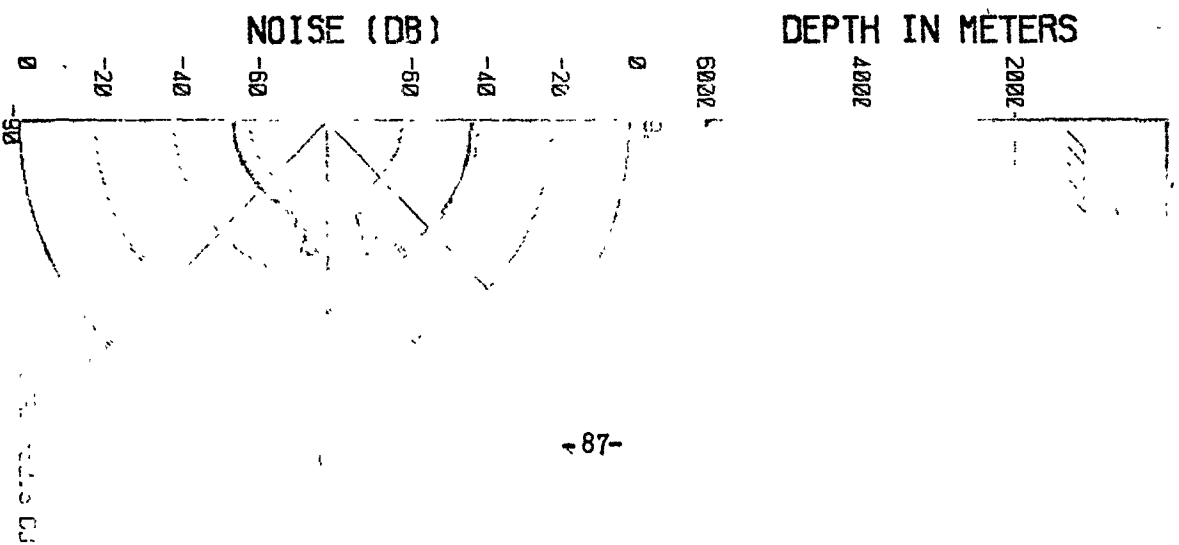
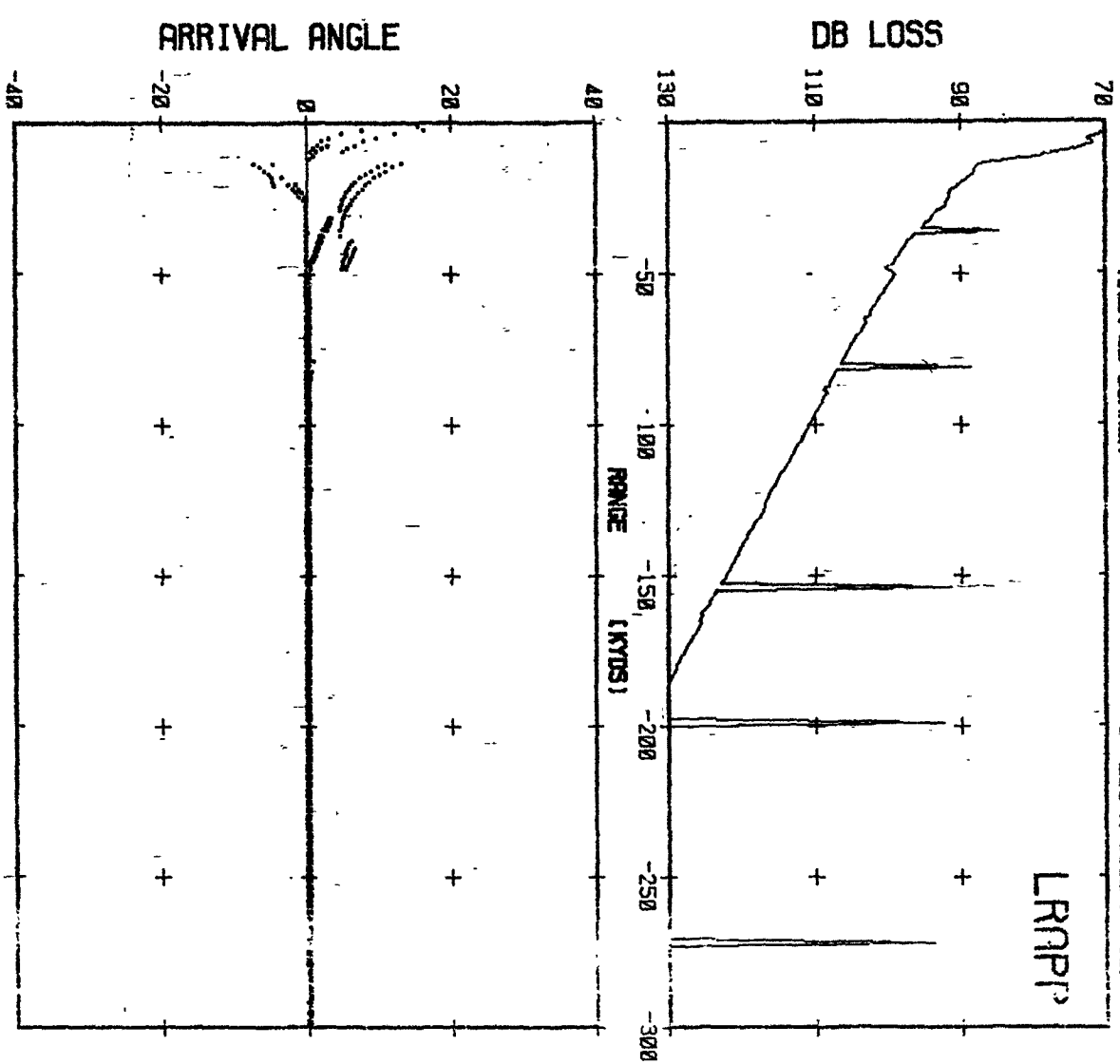


AREA 48 SUMMER

S 286 R 1312 F 150

1450 M

LRNPP

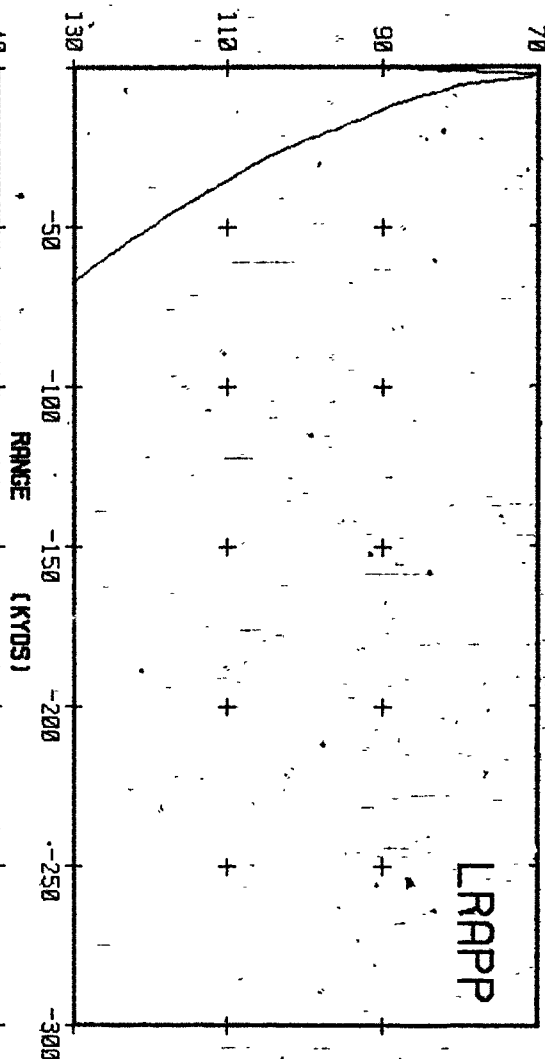


PRER AB SUMMER

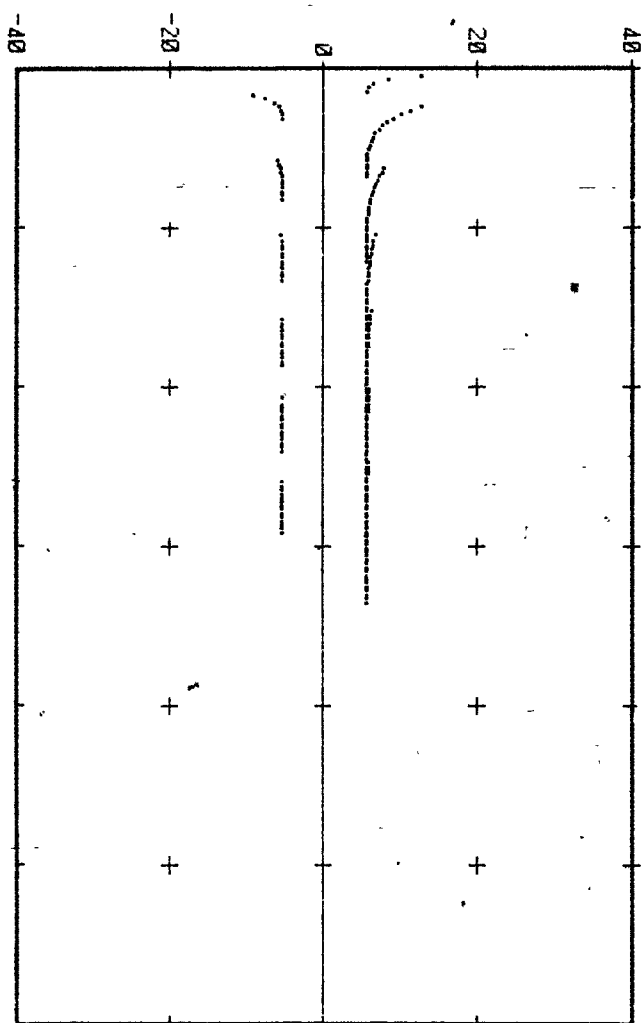
5 20 R 1500 F 150

1450 M/S 1500 1550

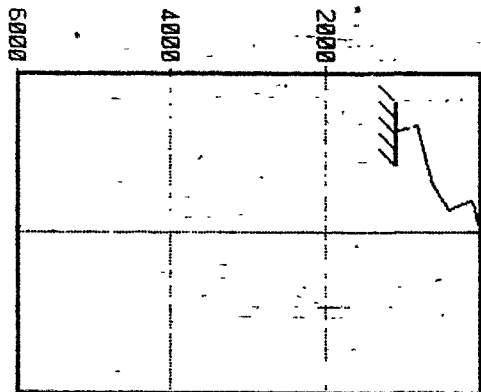
DB LOSS



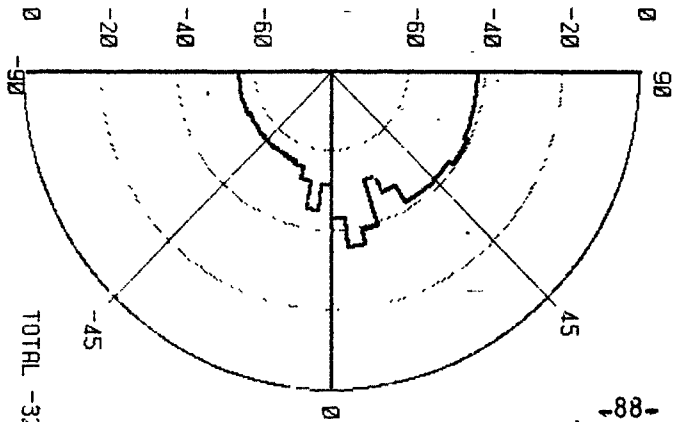
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



TOTAL -32.8 DB

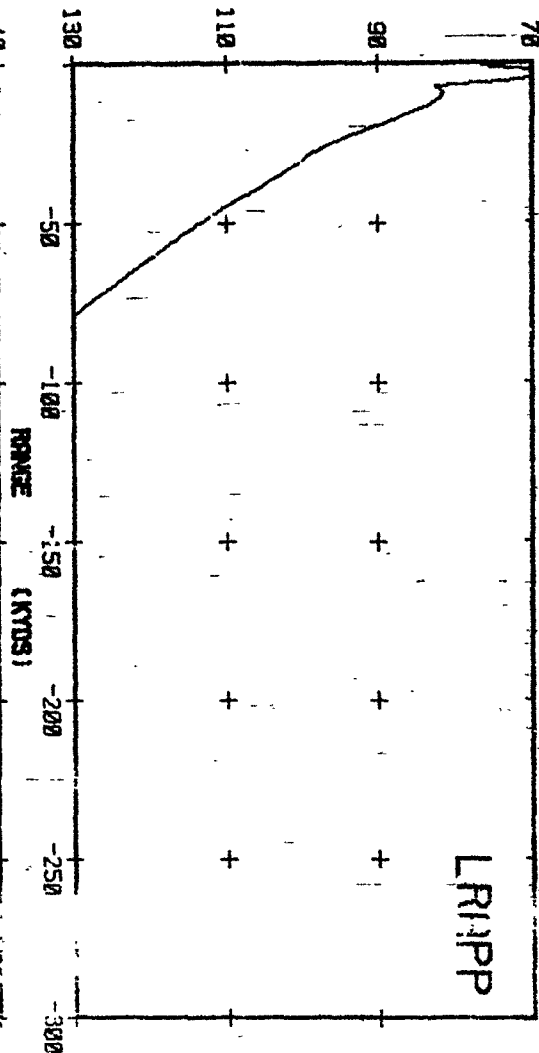
FROM AB SUMMER

S 50 R 1500 F 150

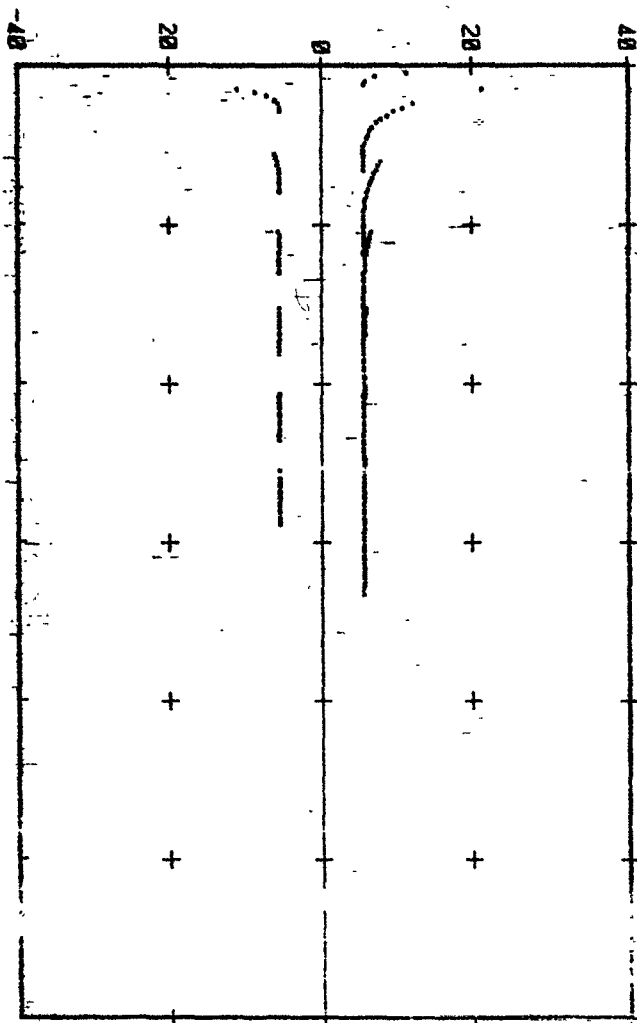
1450 M/3 1500

1550

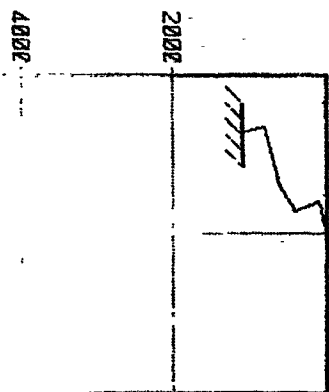
DB LOSS



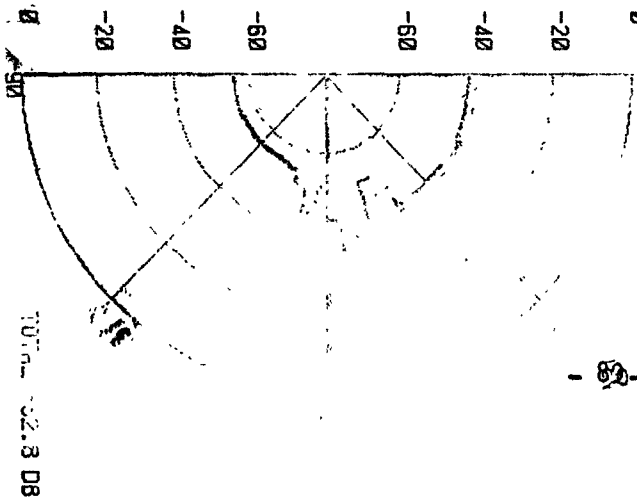
ARRIVAL ANGLE

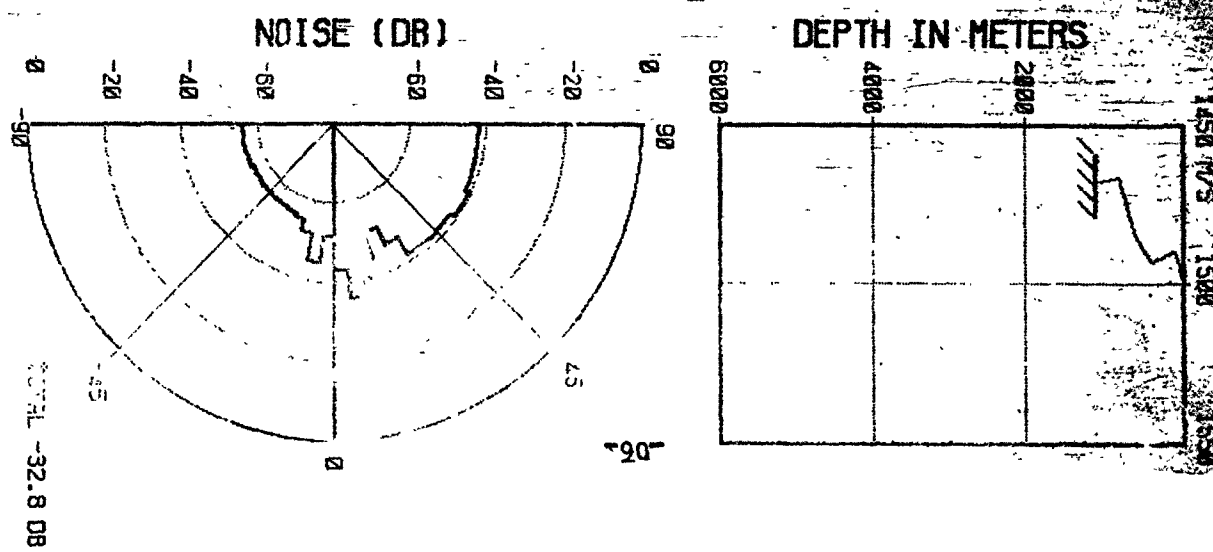
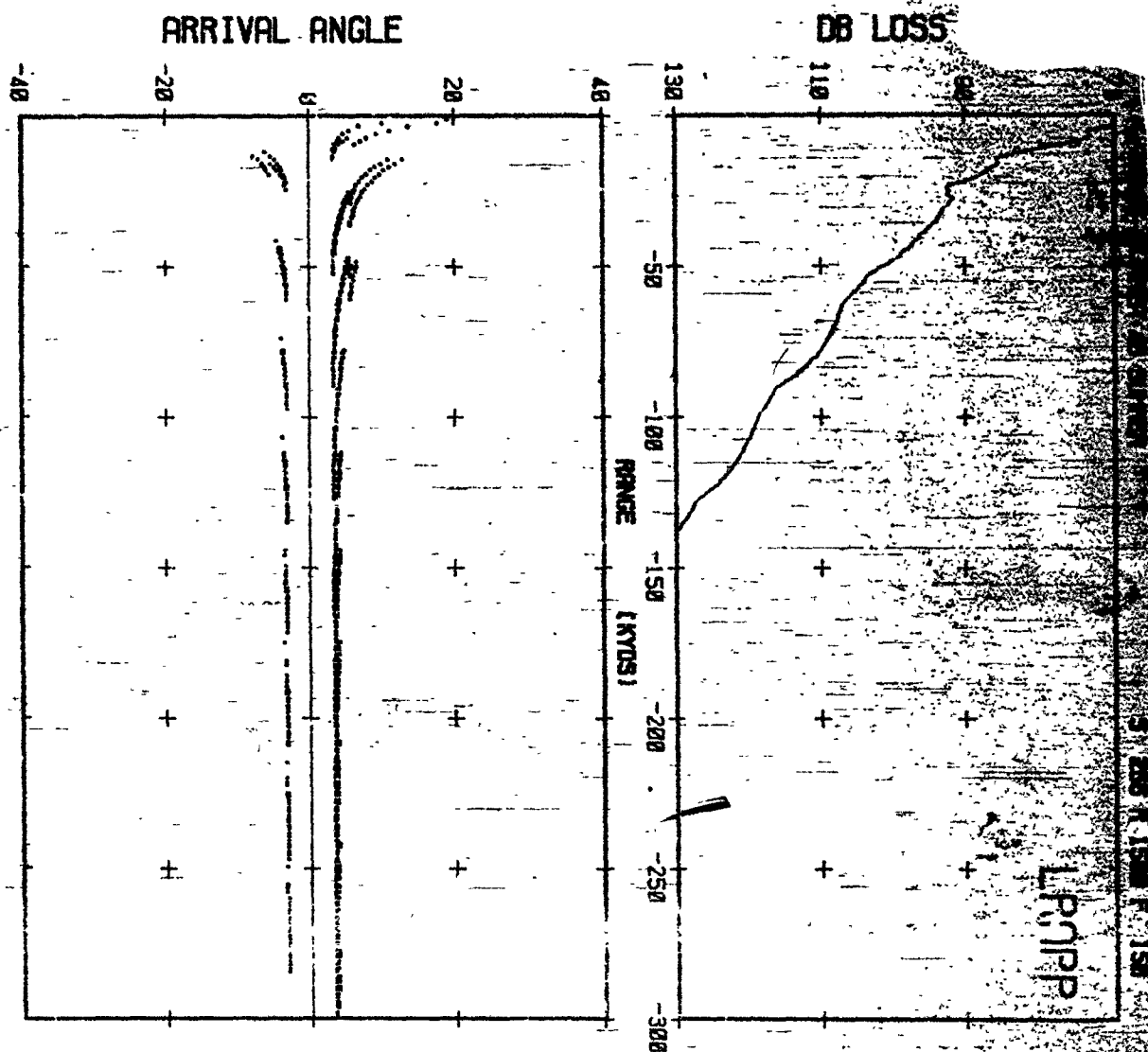


DEPTH IN METERS



NOISE (DB)





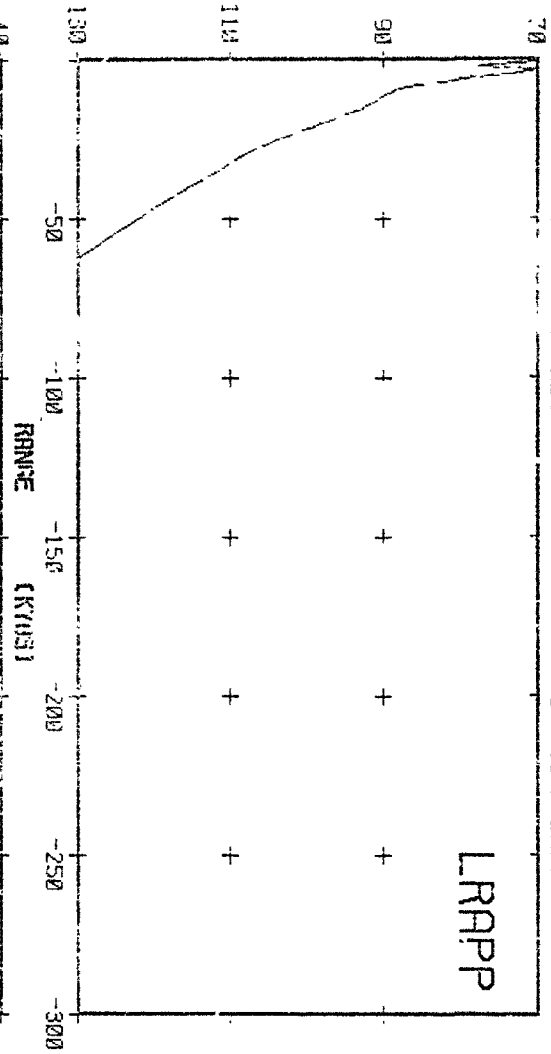
PRIN AB SUMMER

S 20 R 2625 F 150

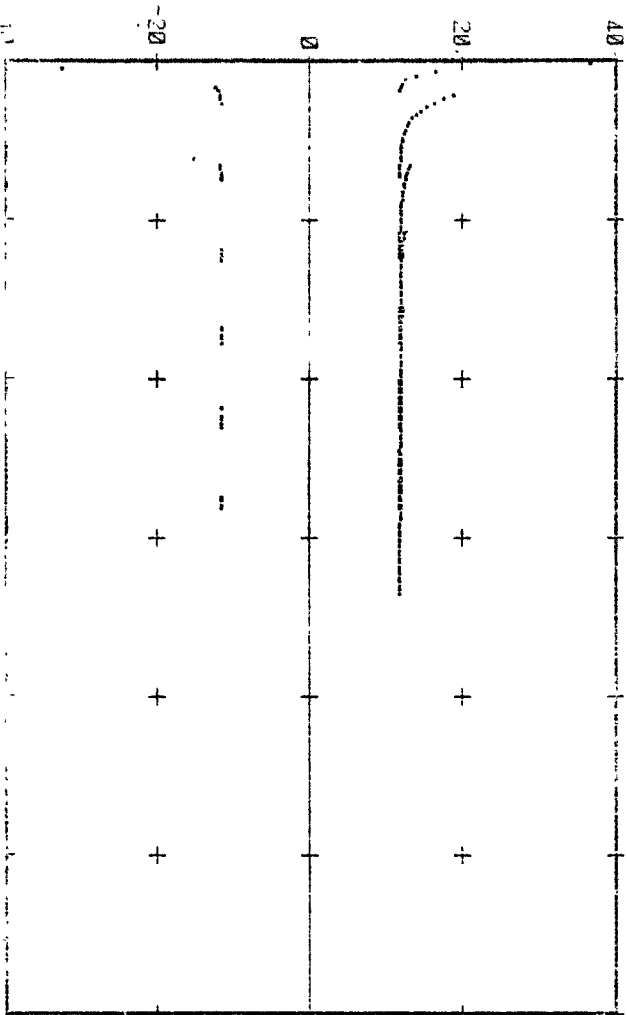
1450 M/S 1500

1550

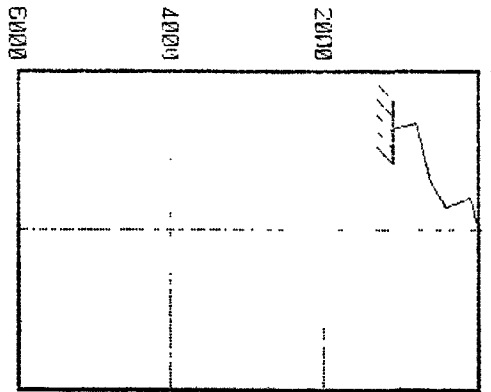
DB LOSS



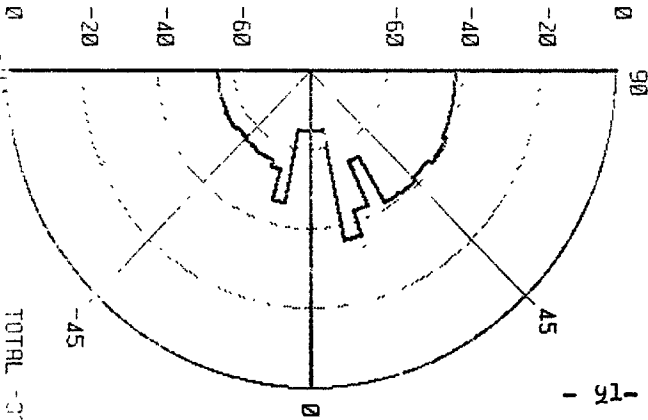
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



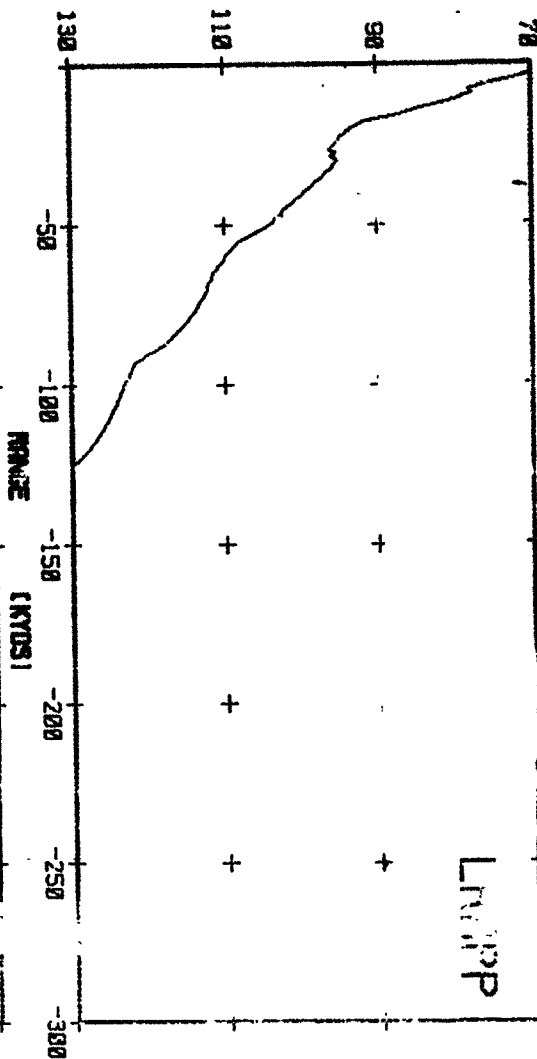
TOTAL -37.8 dB

AREA 48 SUMMER

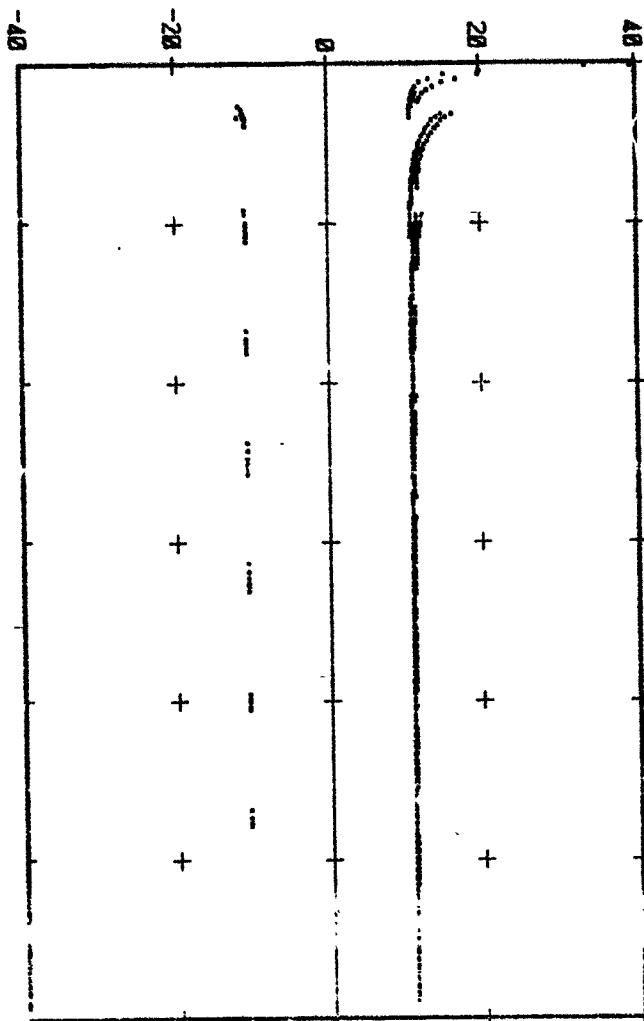
S 268 N 3525 F 150

1452

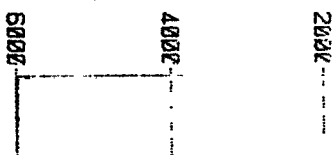
DB LOSS



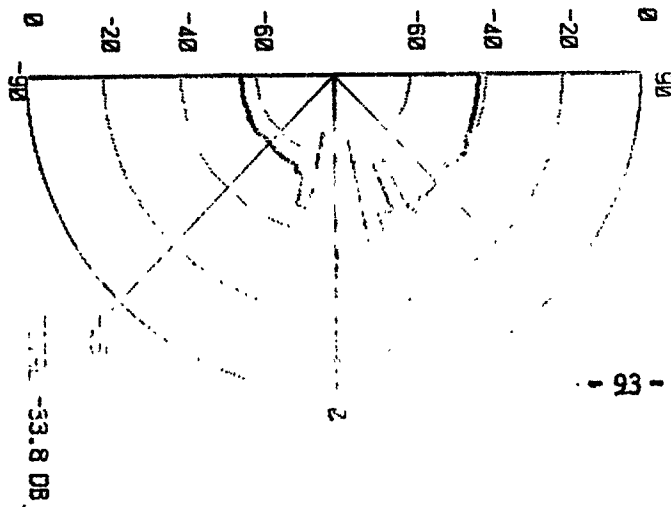
ARRIVAL ANGLE



DEPTH IN METERS

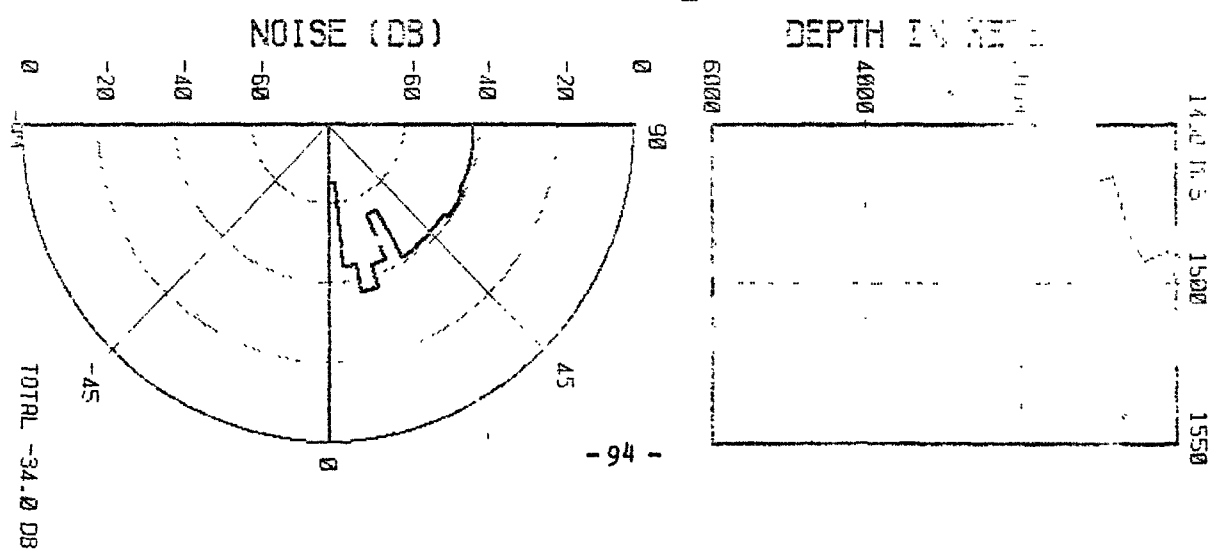
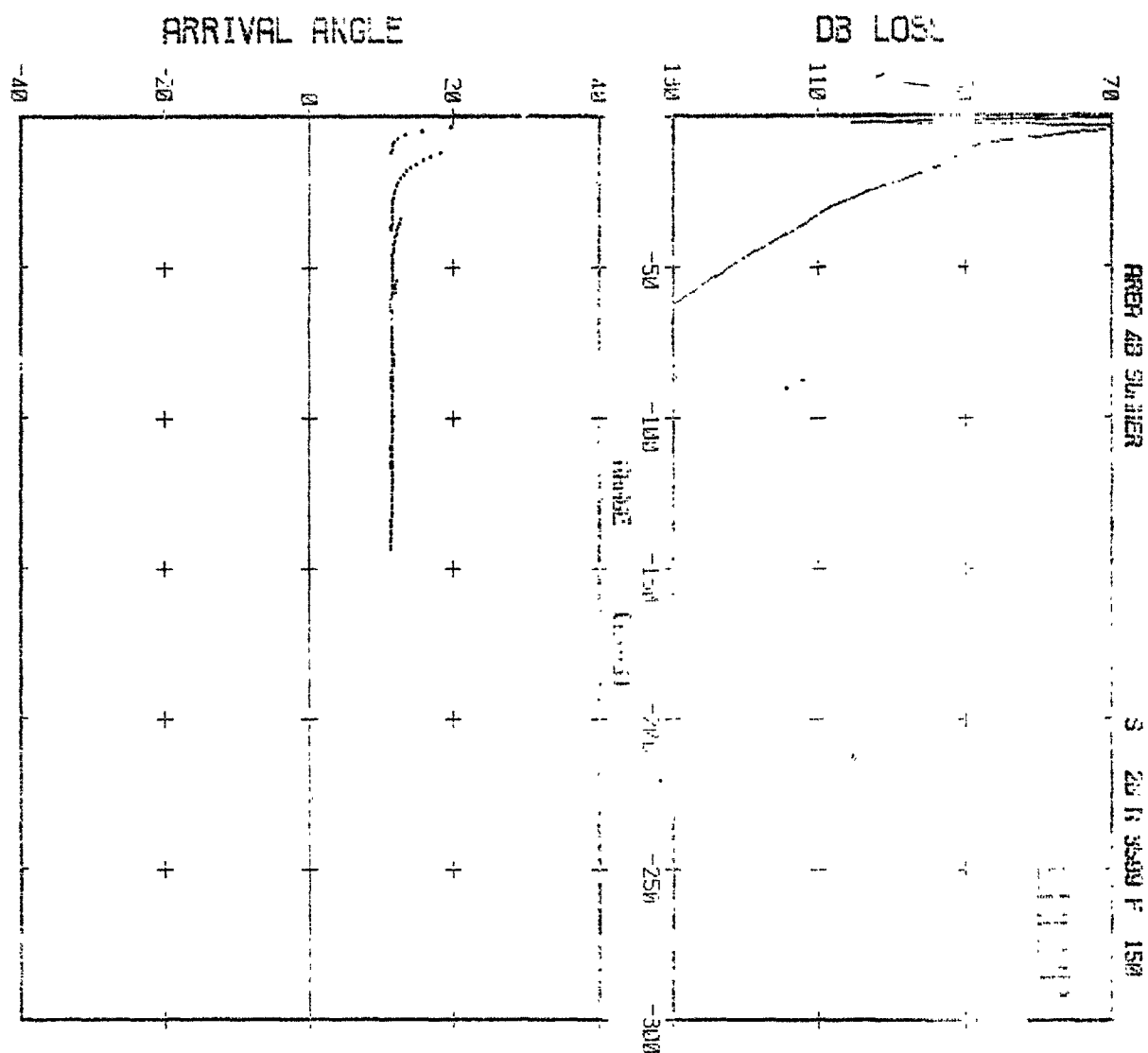


NOISE (DB)



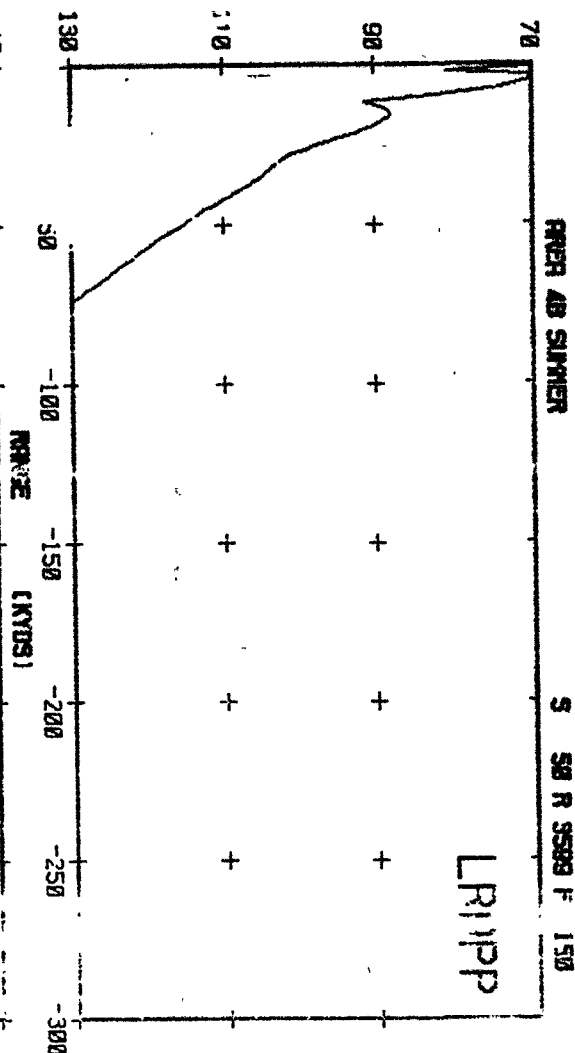
- 93 -

-33.8 DB

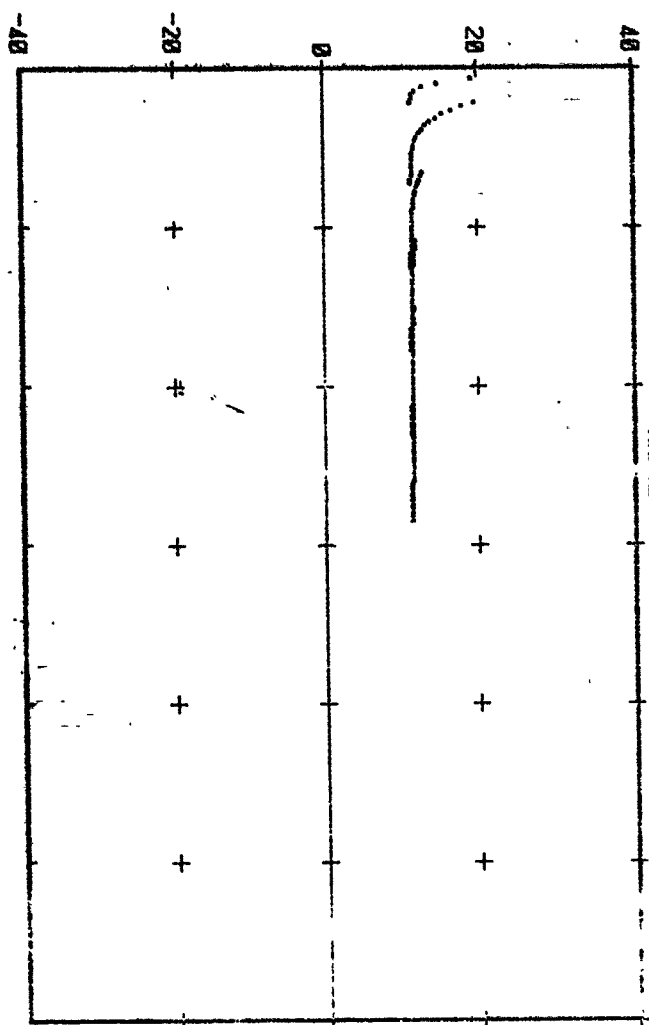


TOTRL -34.0 DB

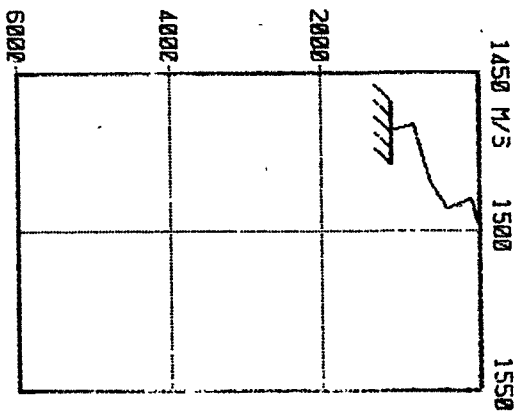
DB LOSS



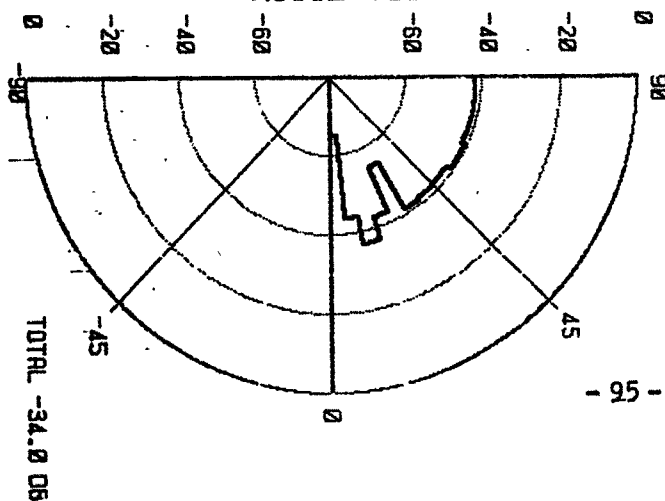
ARRIVAL ANGLE

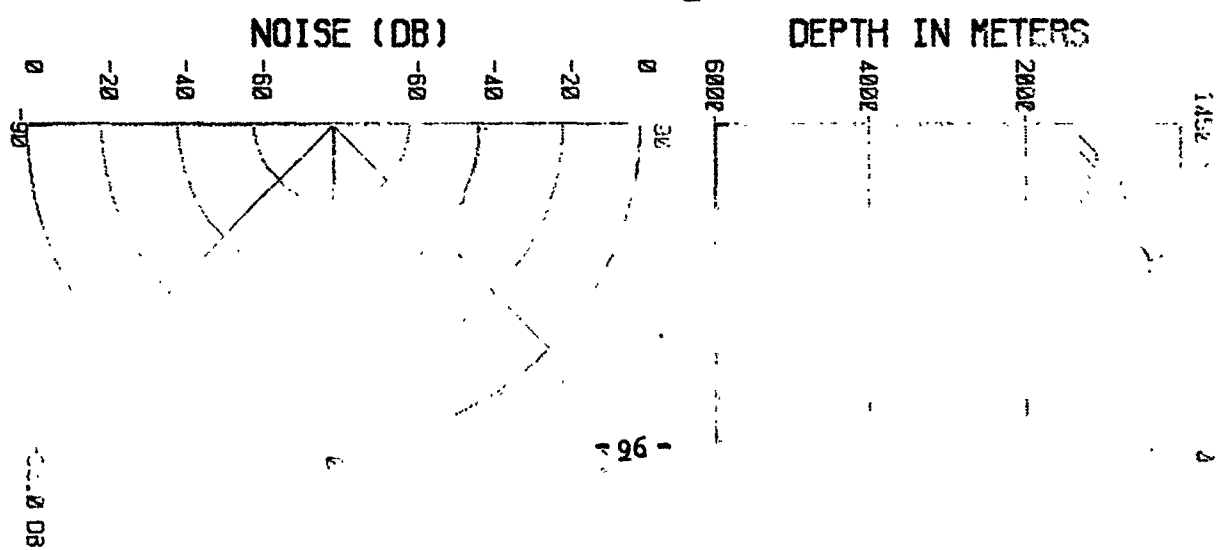
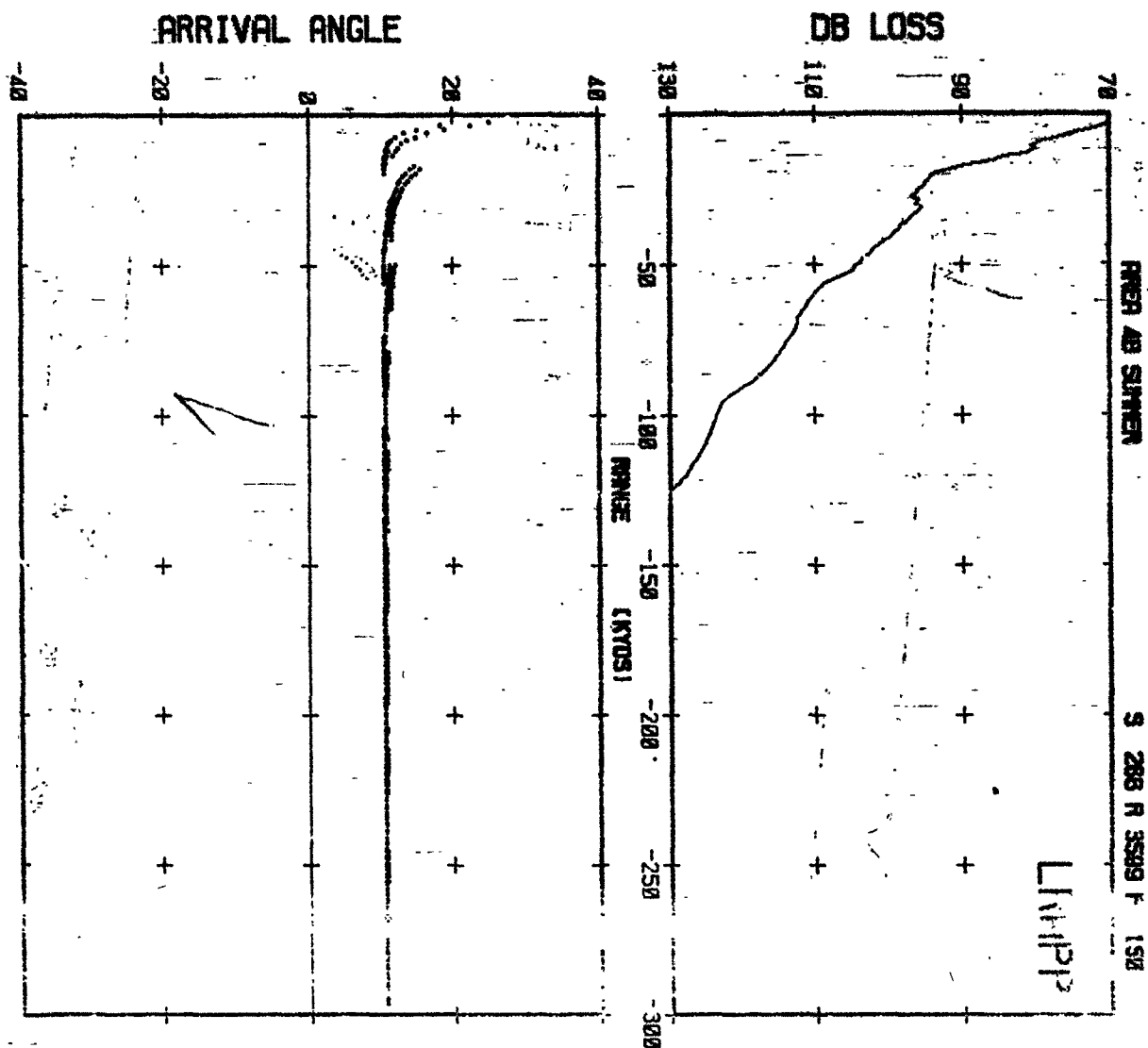


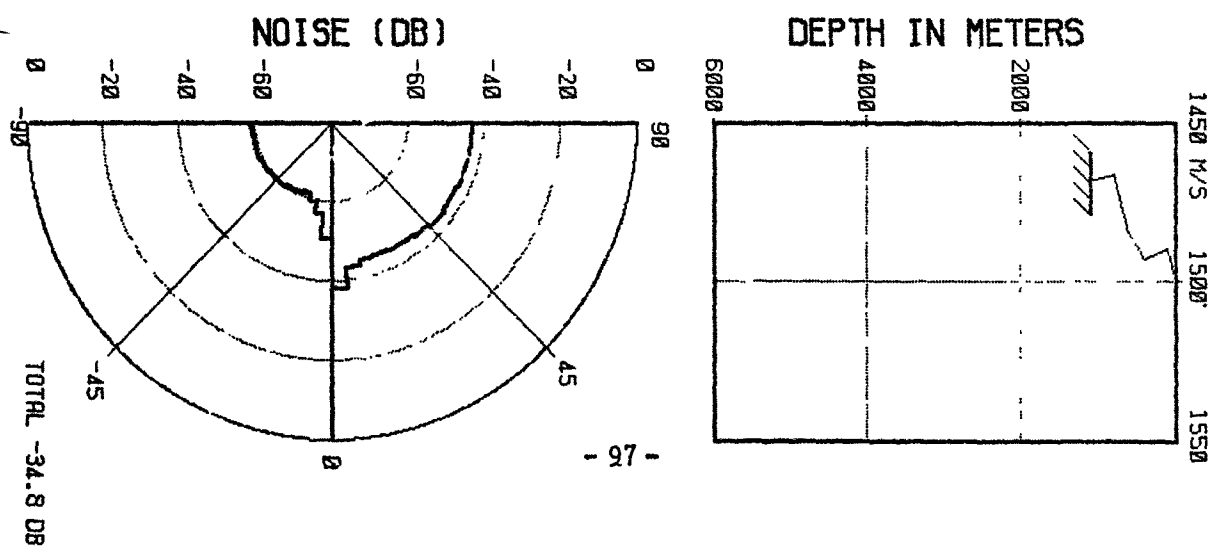
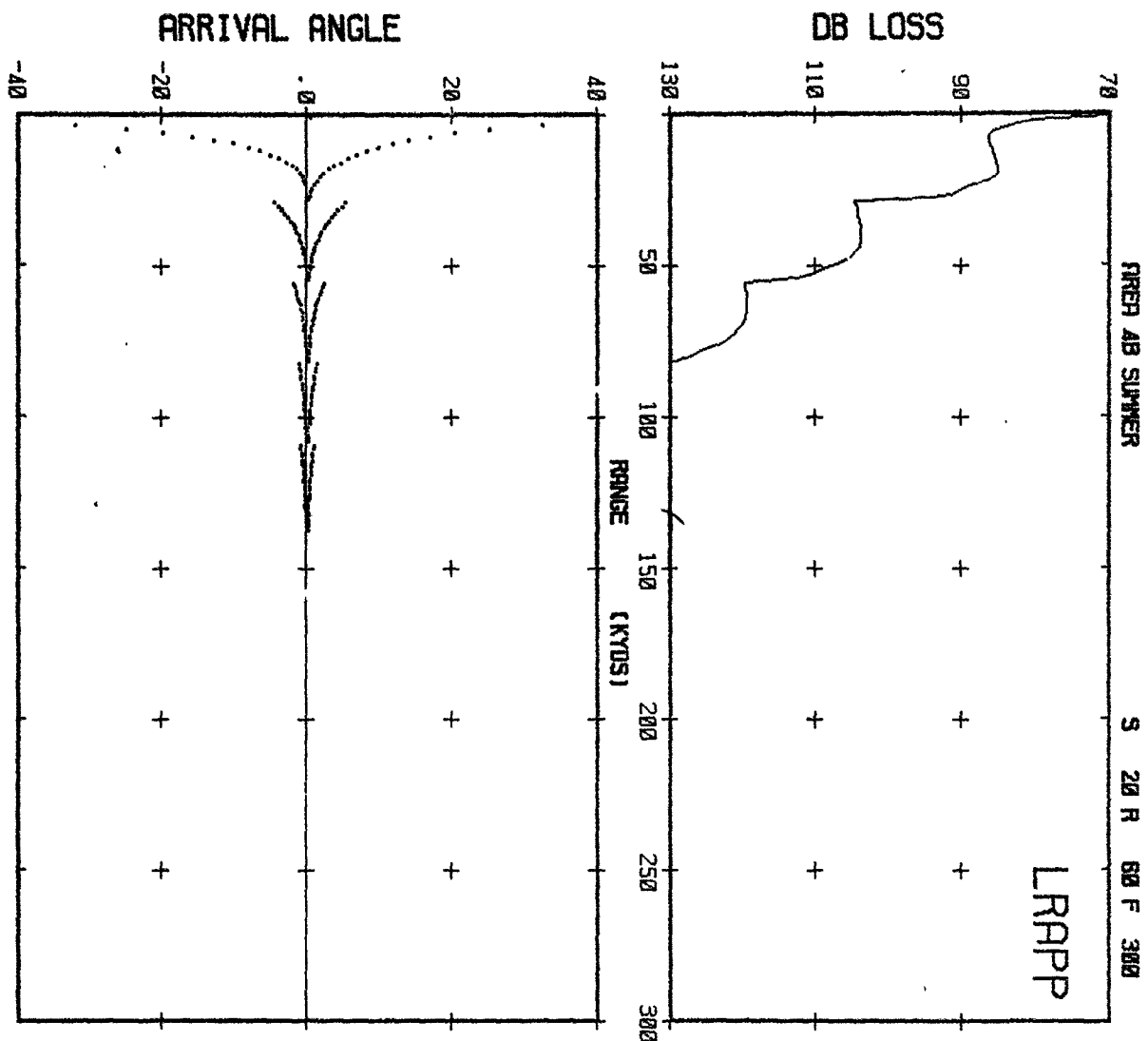
DEPTH IN METERS

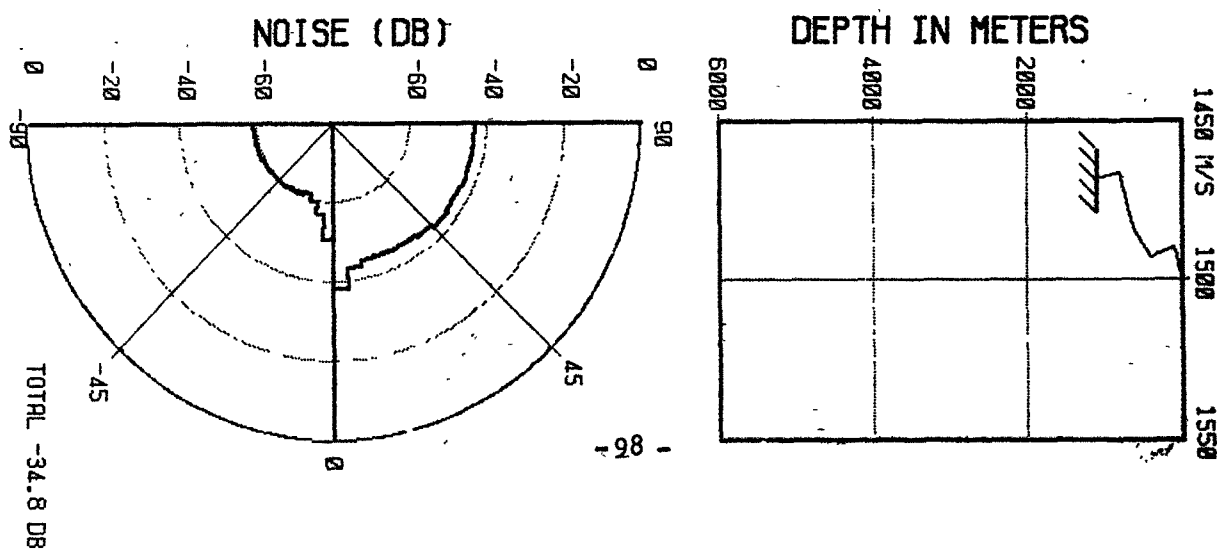
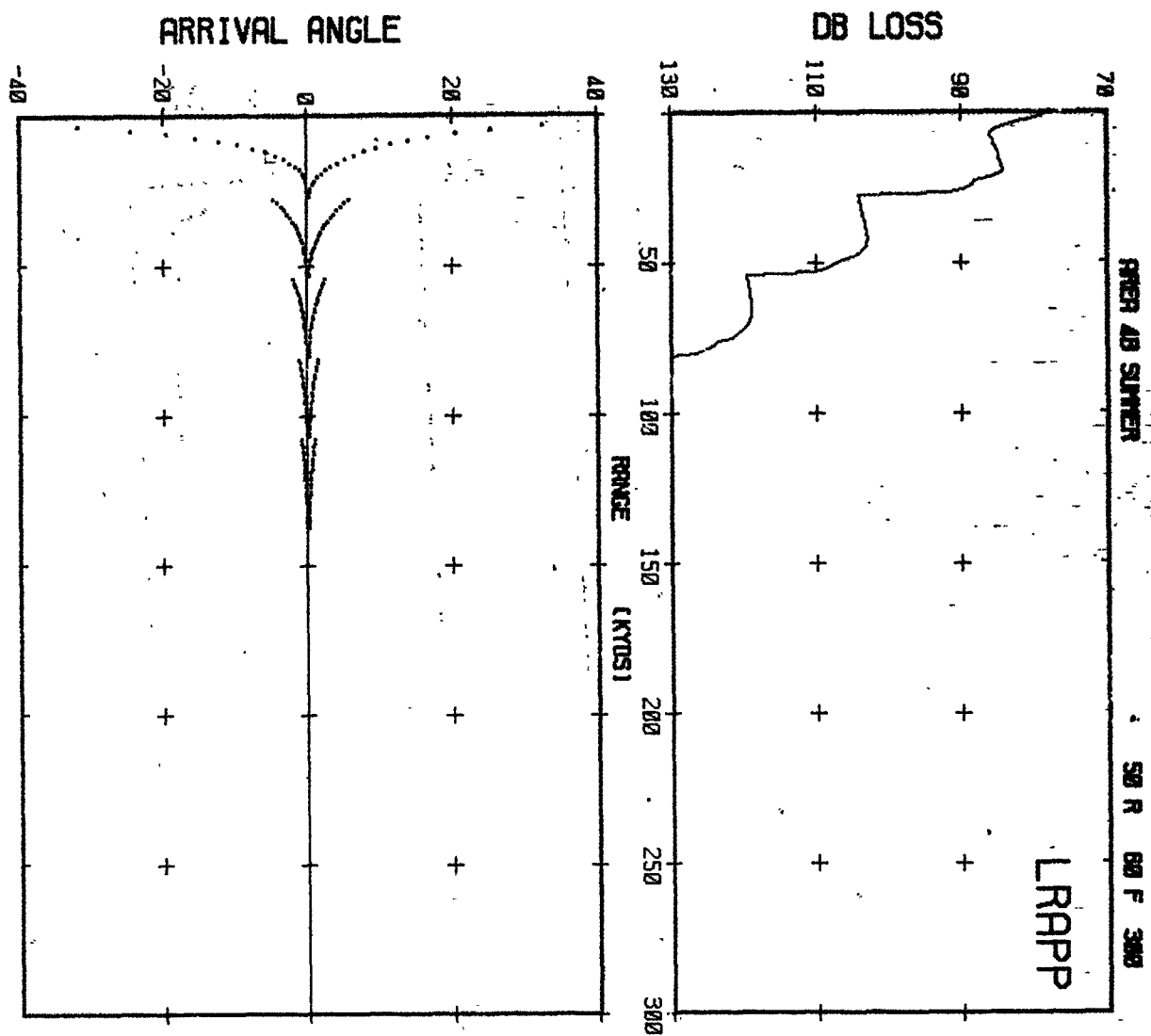


NOISE (DB)







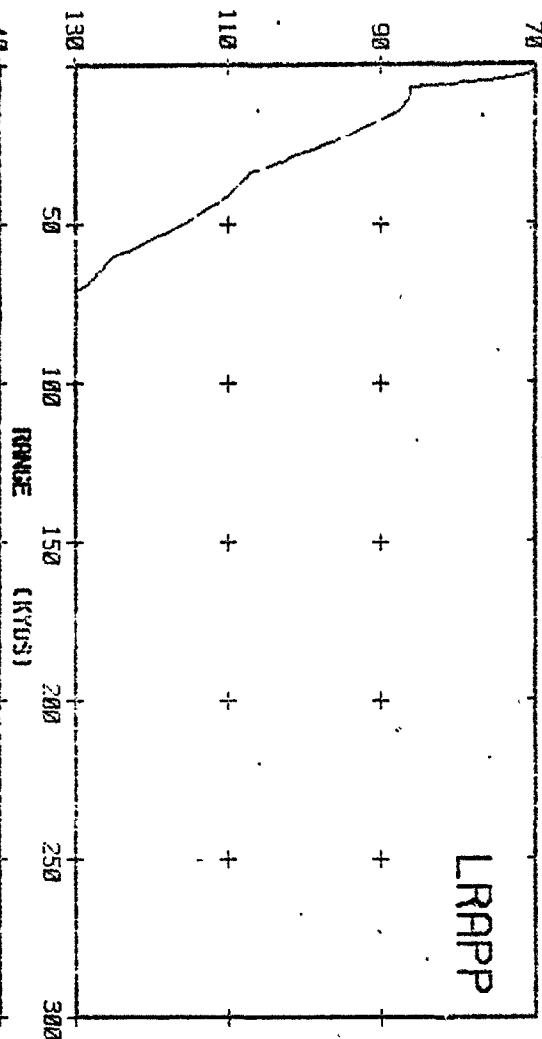


RIVER AIR SUMMER

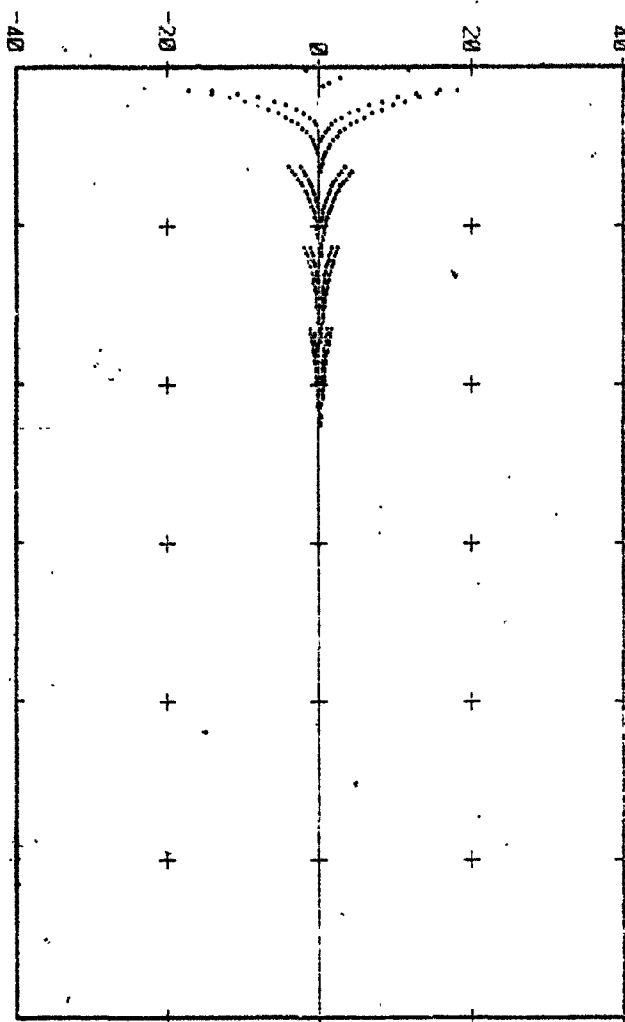
S 266 R 60 F 300

1450 M/S 1500 1550

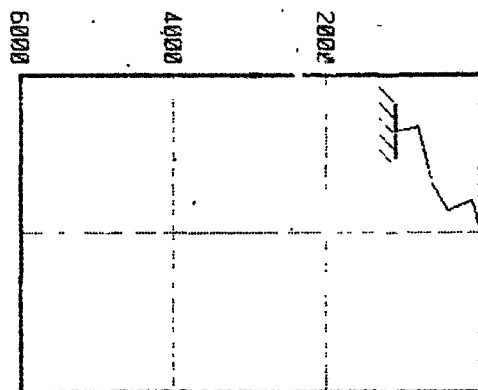
DB LOSS



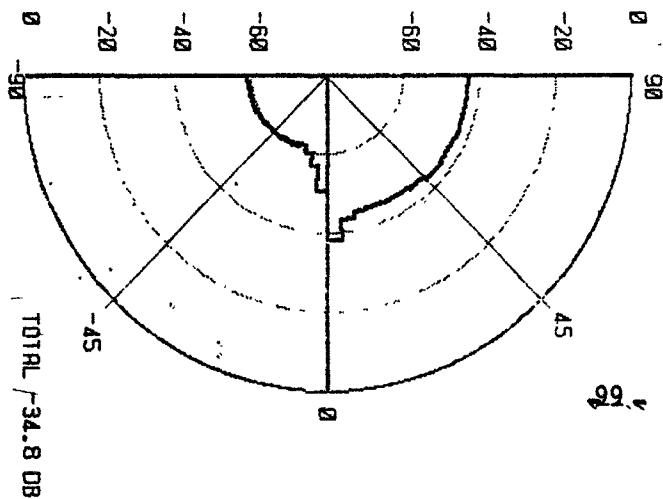
ARRIVAL ANGLE

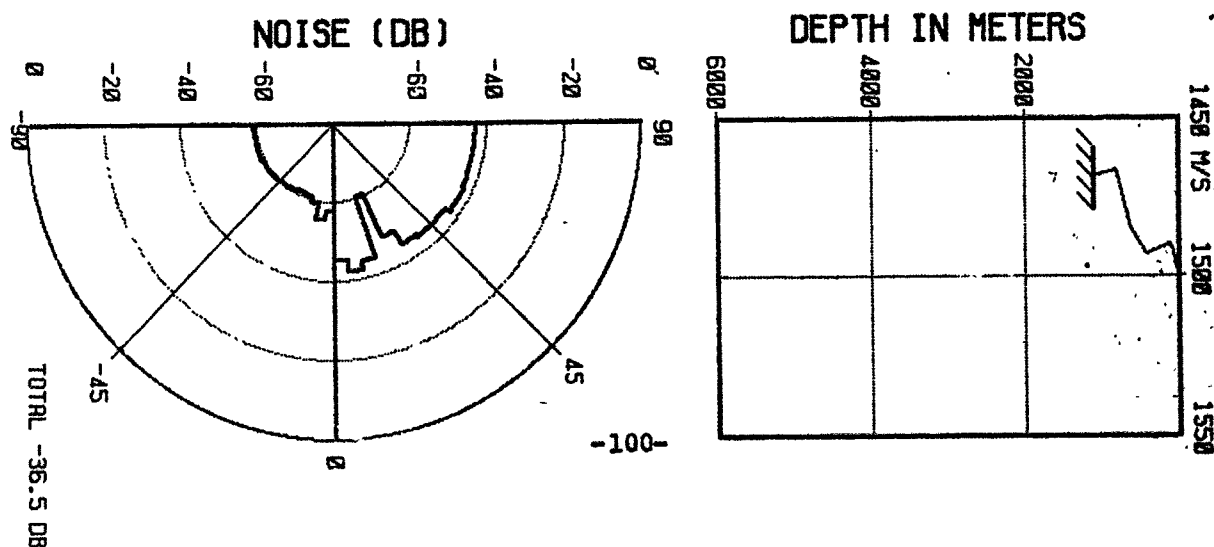
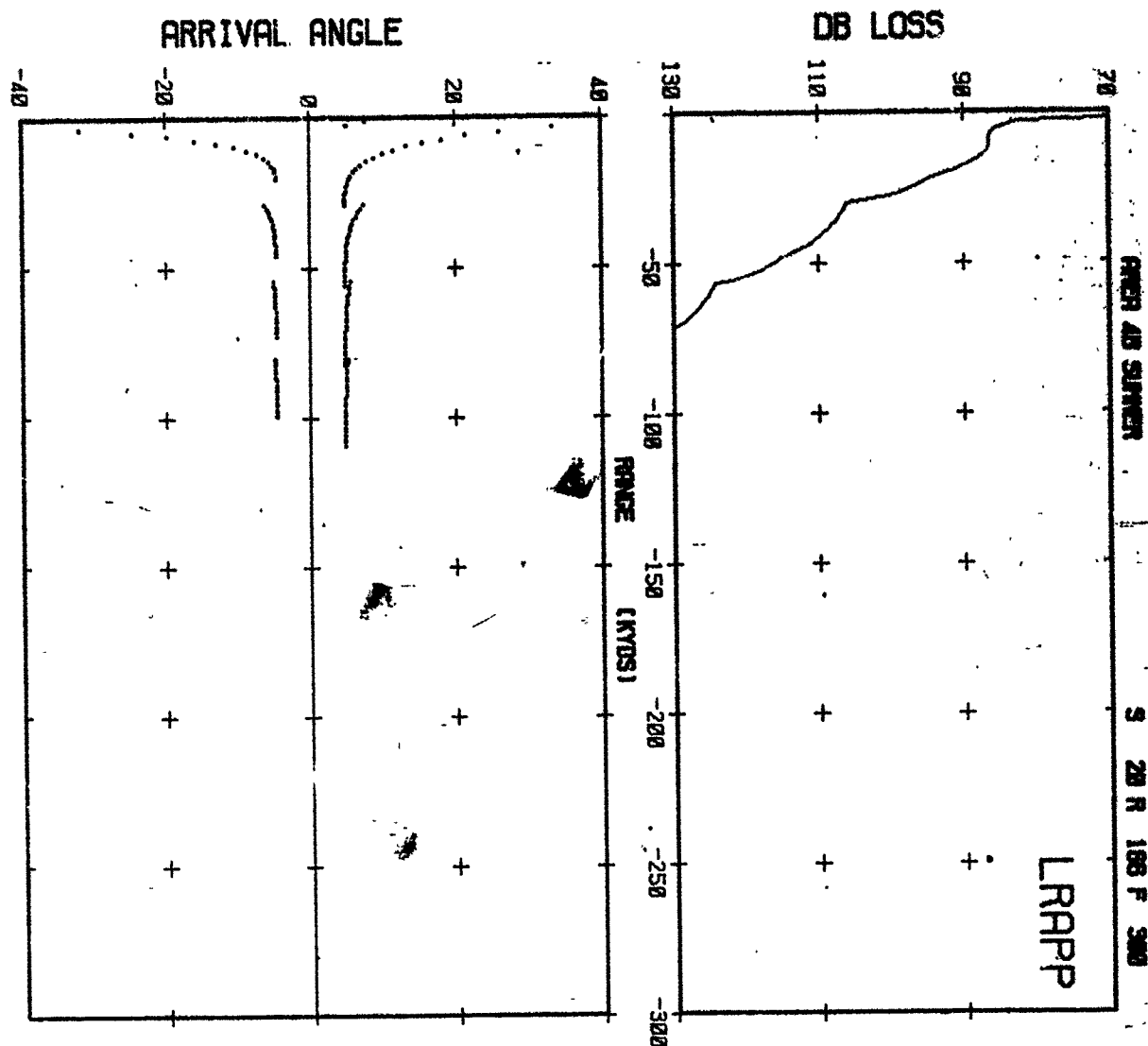


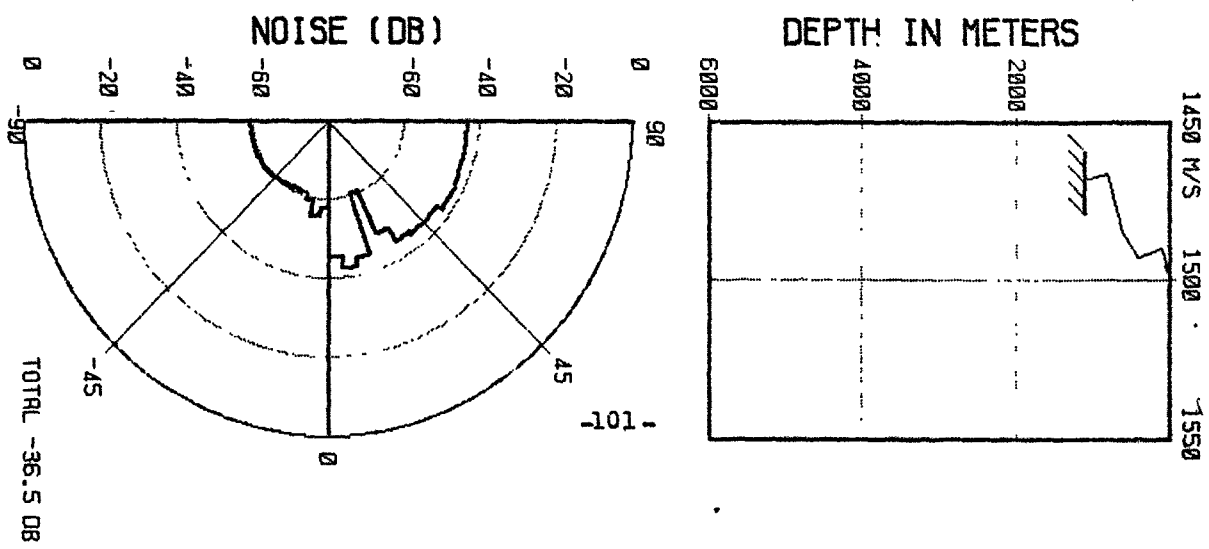
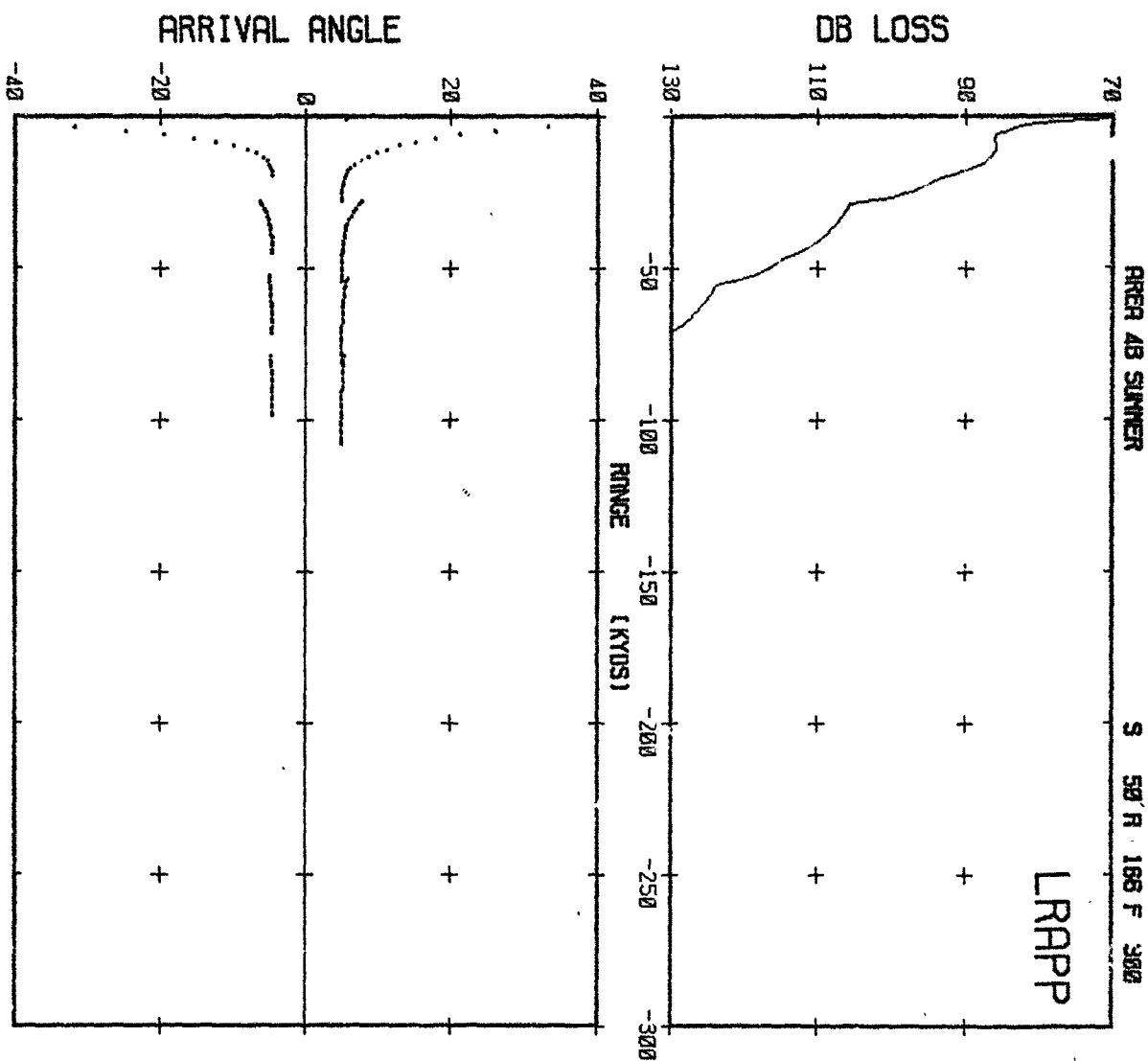
DEPTH IN METERS

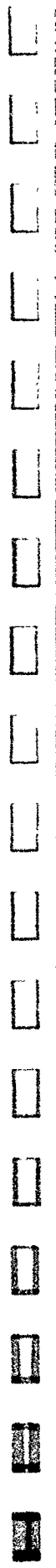


NOISE (DB)

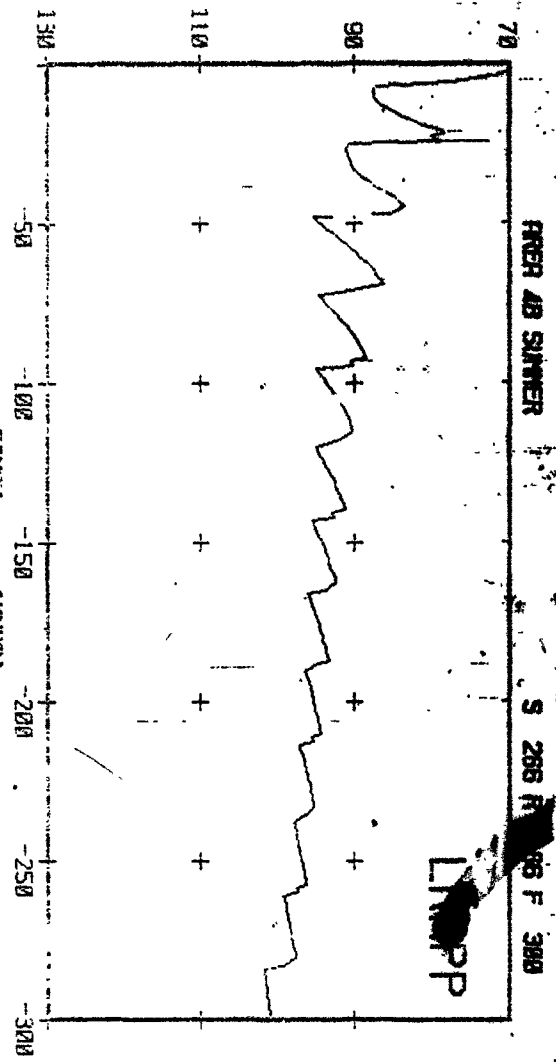




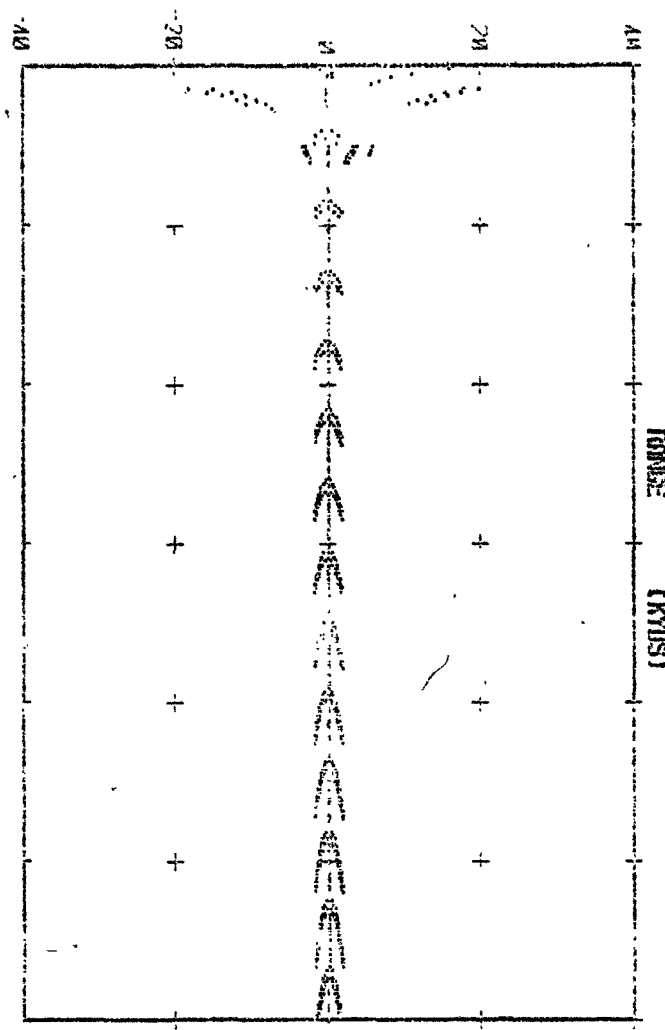




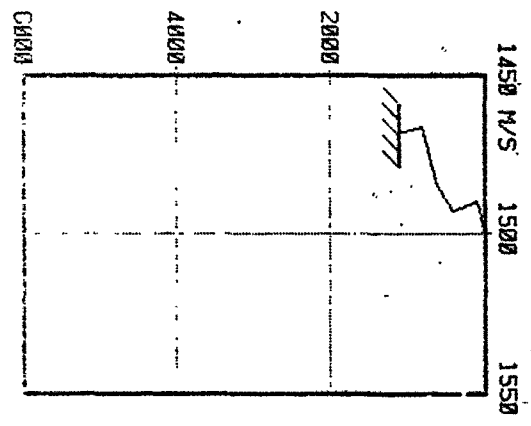
DB LOSS



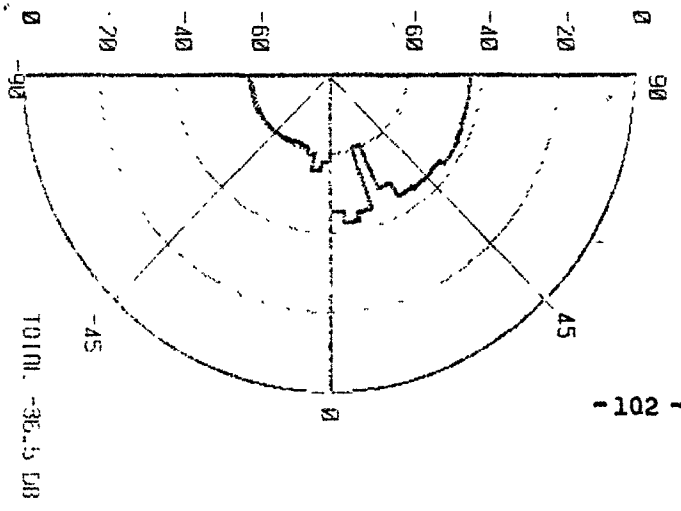
ARRIVAL ANGLE

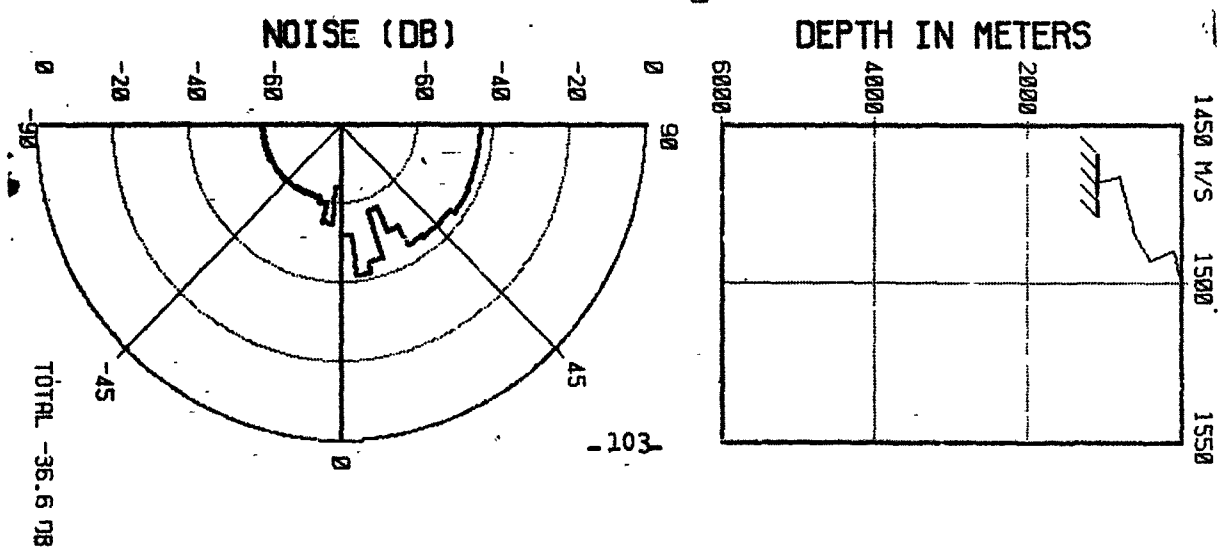
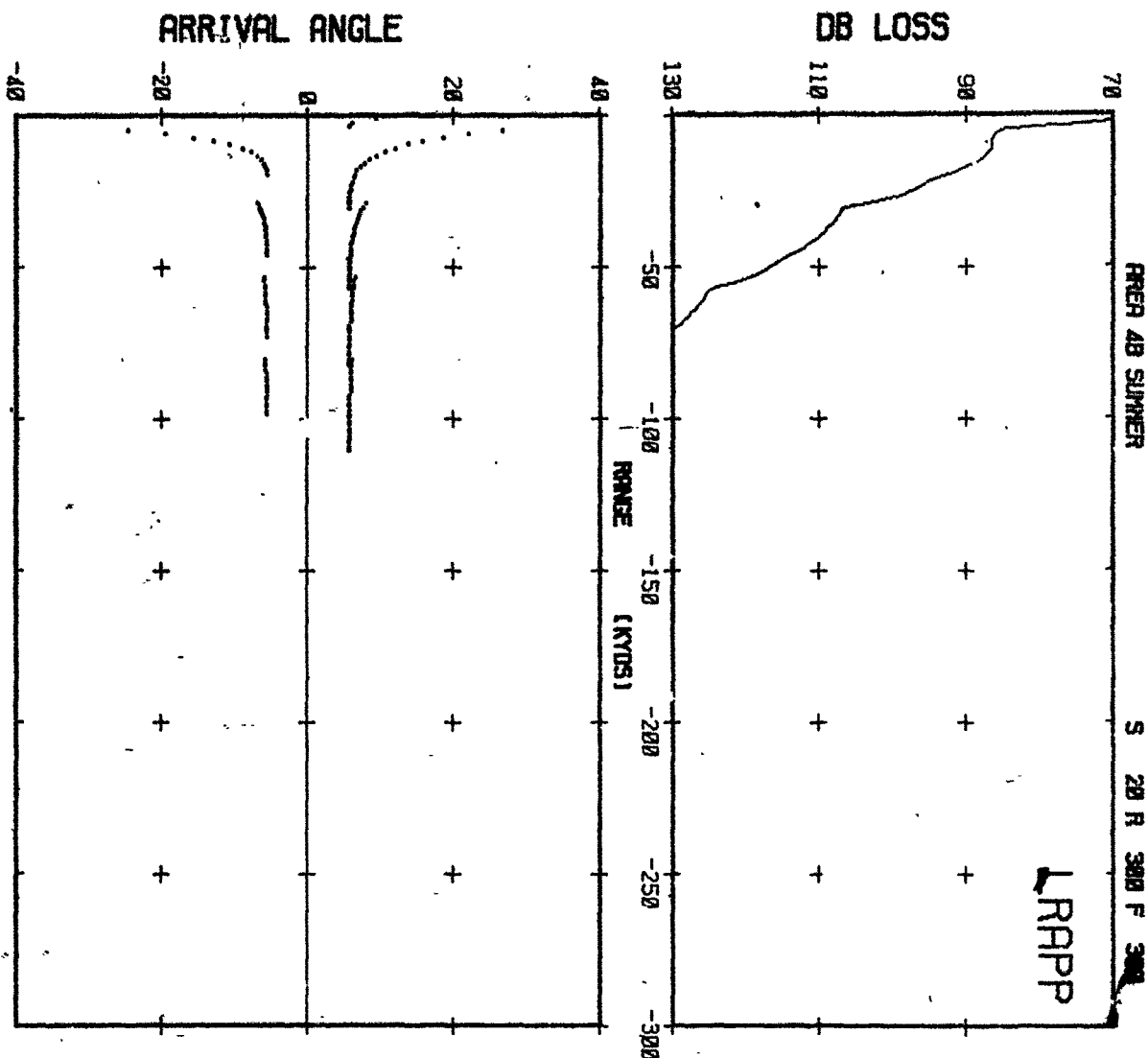


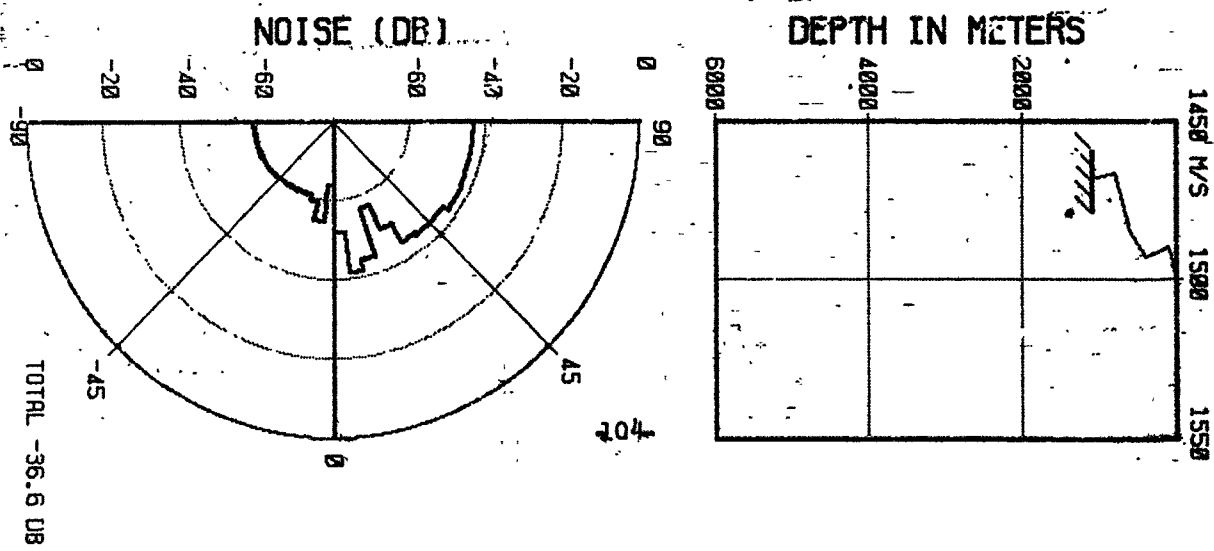
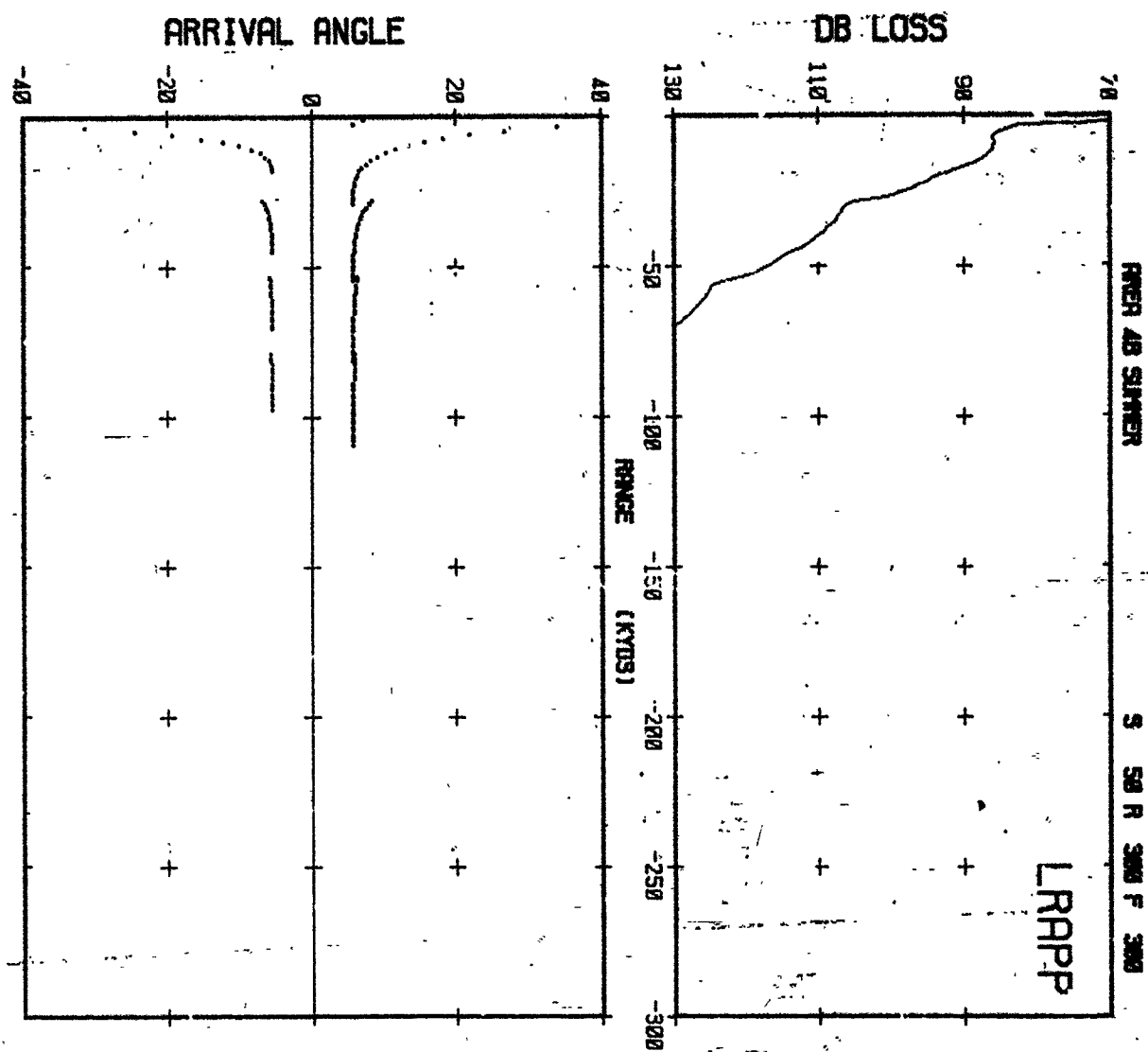
DEPTH IN METERS



NOISE (DB)





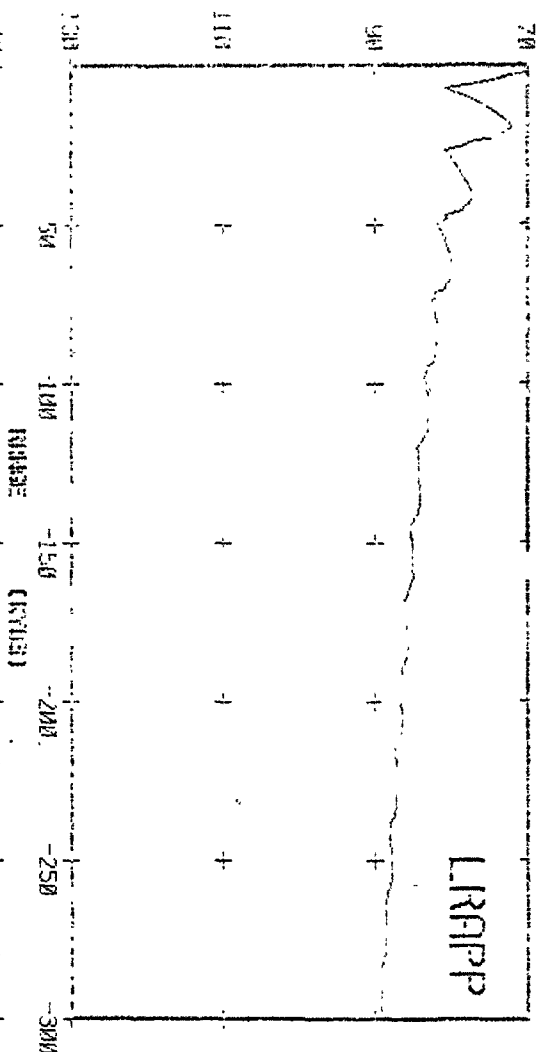


GREEN AIR SURVEY

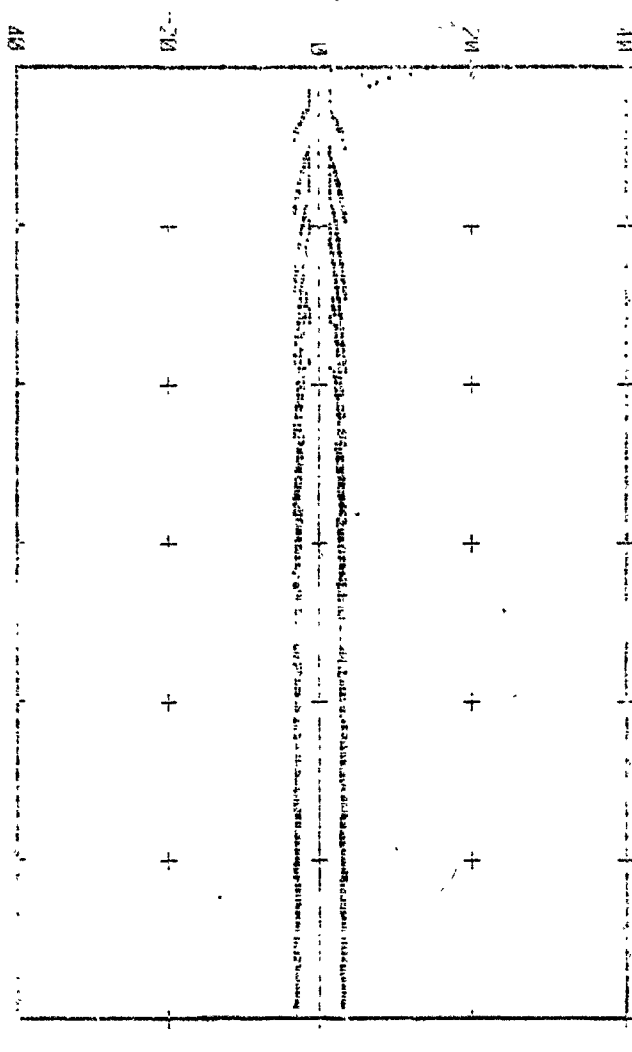
S 266 R 35M F 300

1450 H/S 1500 1550

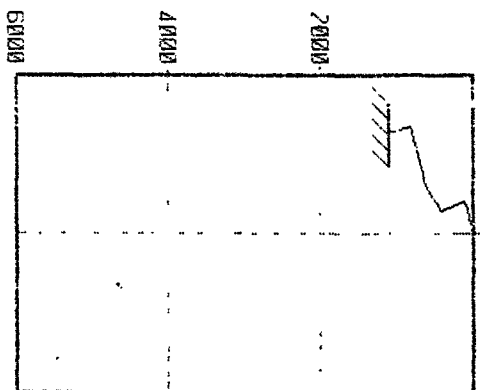
LOSS



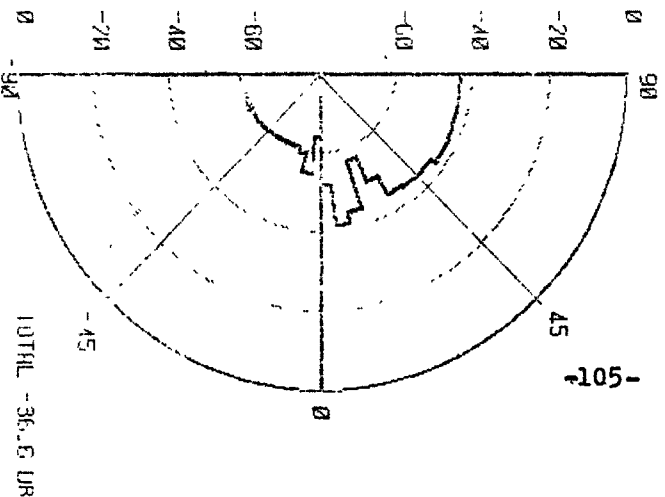
ARRIVAL ANGLE



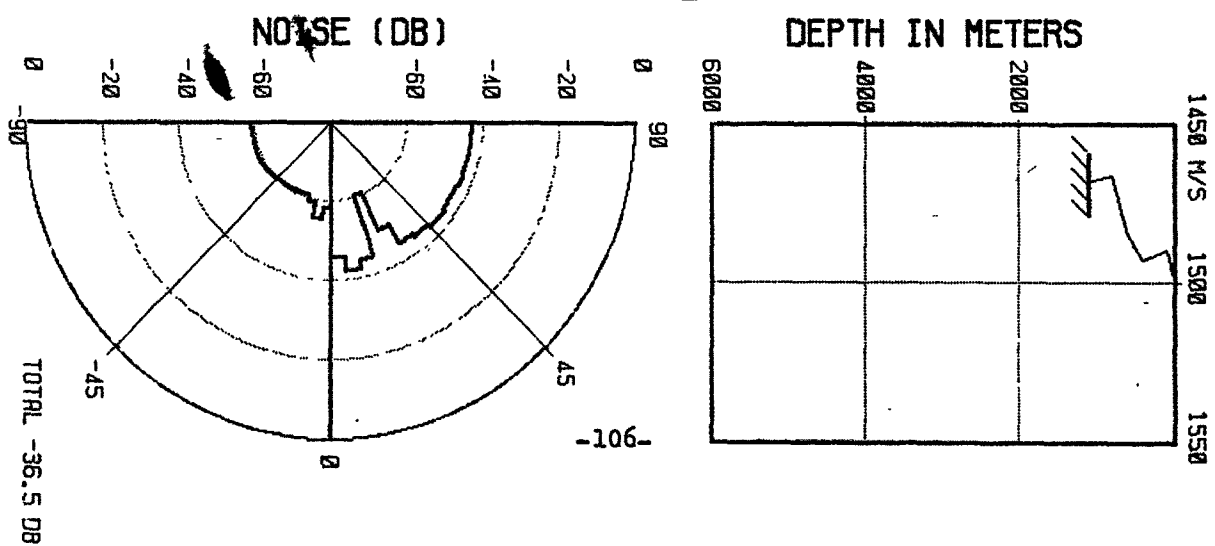
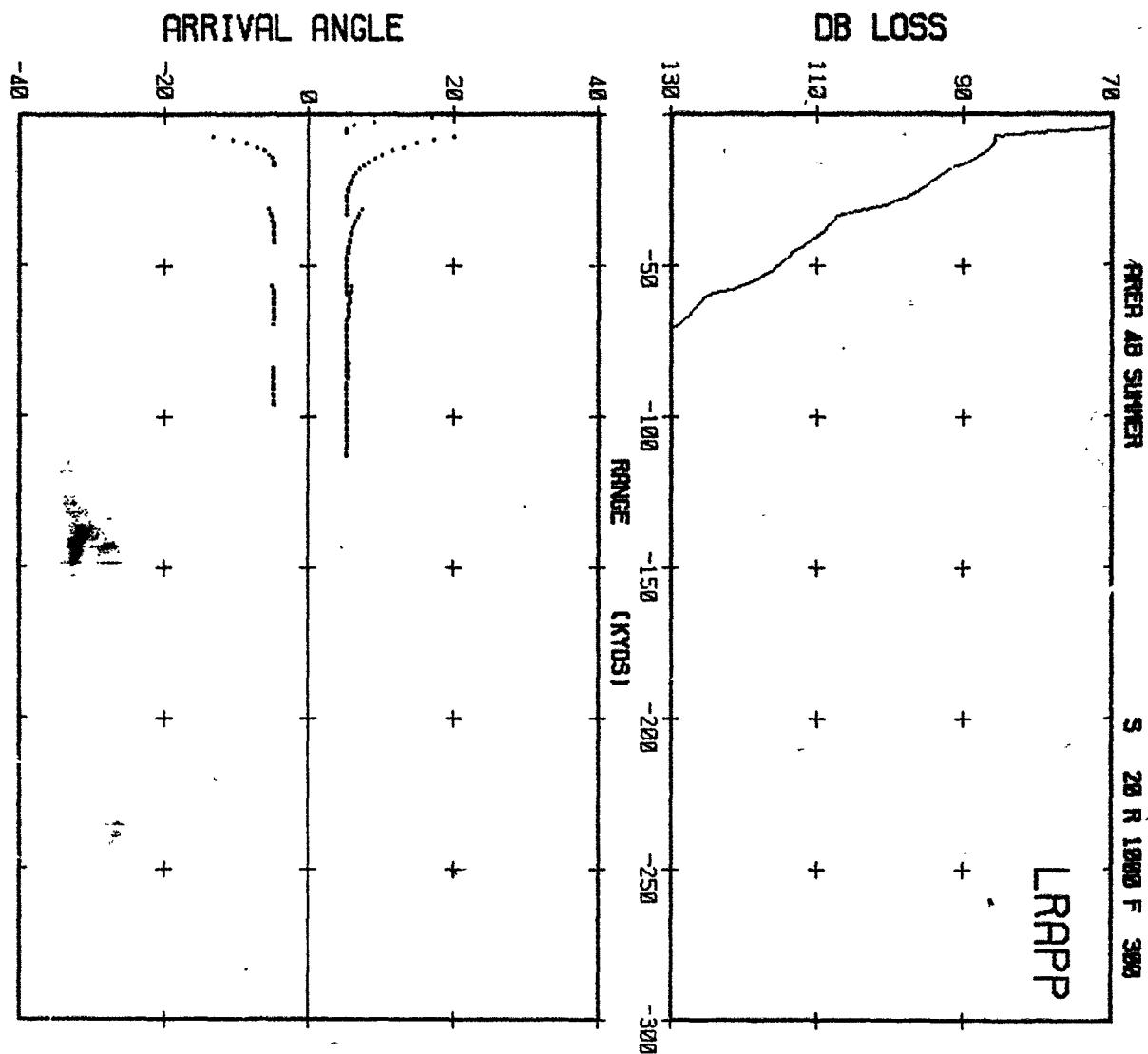
DEPTH IN METERS



NOISE (DB)



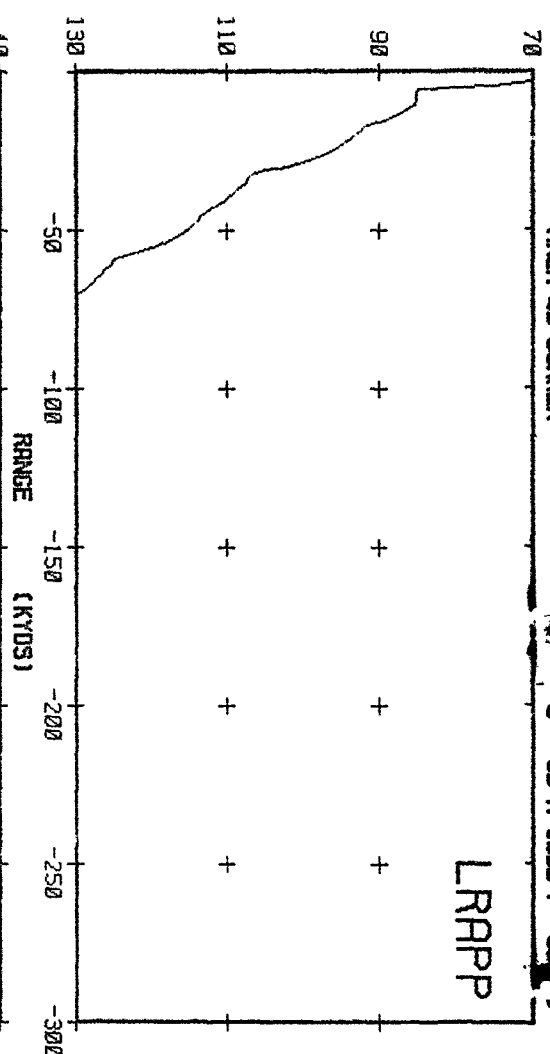
10THL - 36.6 DB



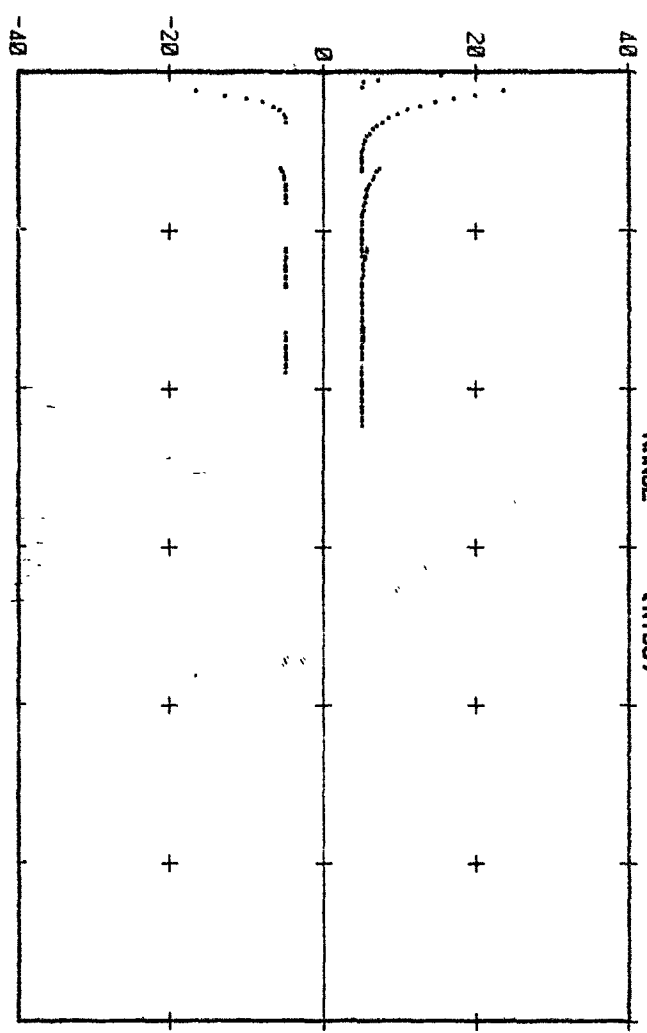
AREA 4B SUMNER

1450 M/S 1500 1550

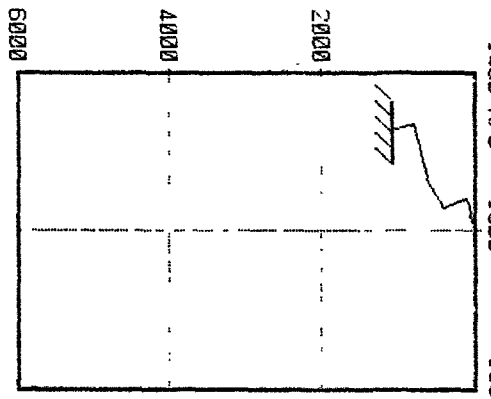
DB LOSS



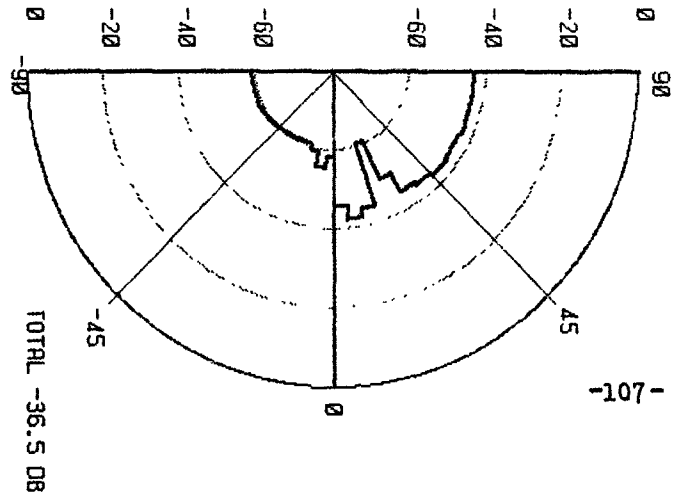
ARRIVAL ANGLE

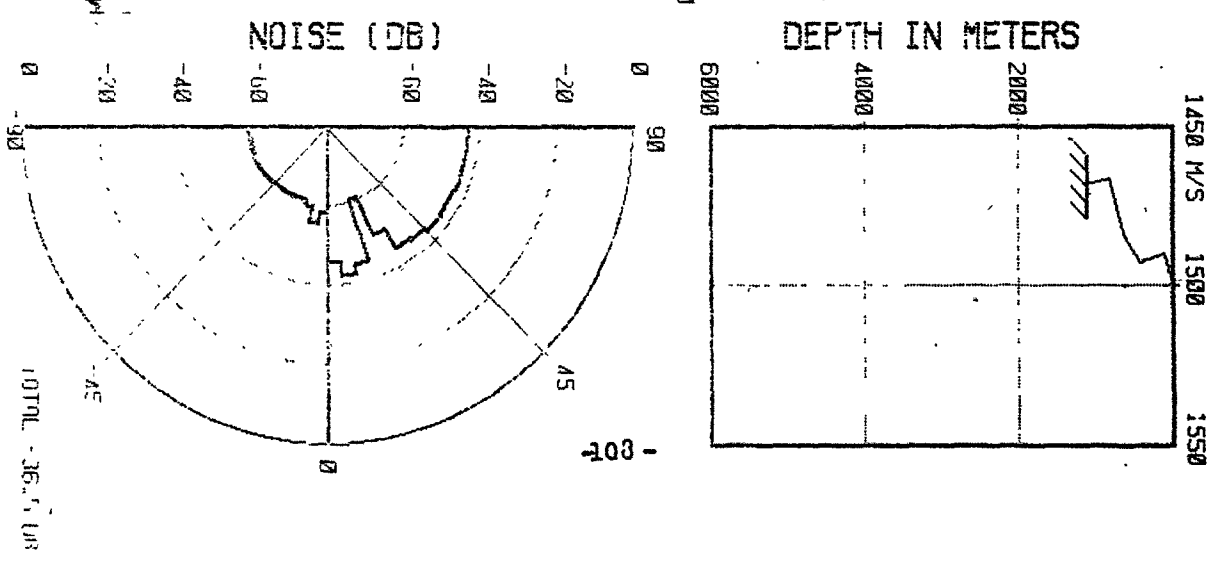
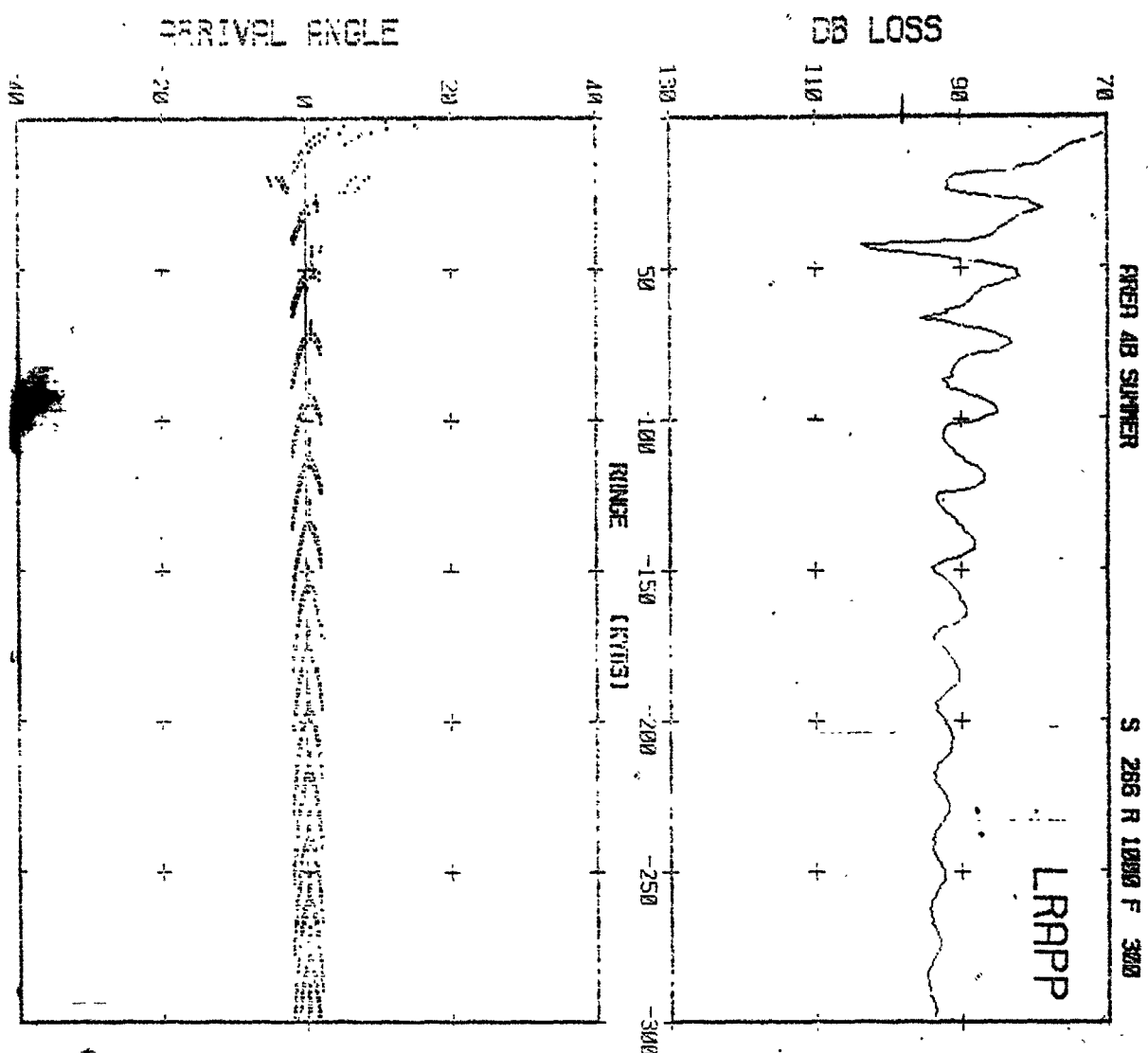
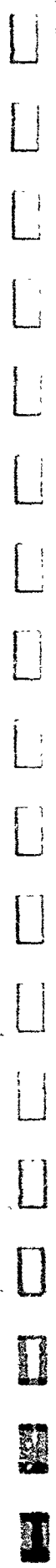


DEPTH IN METERS



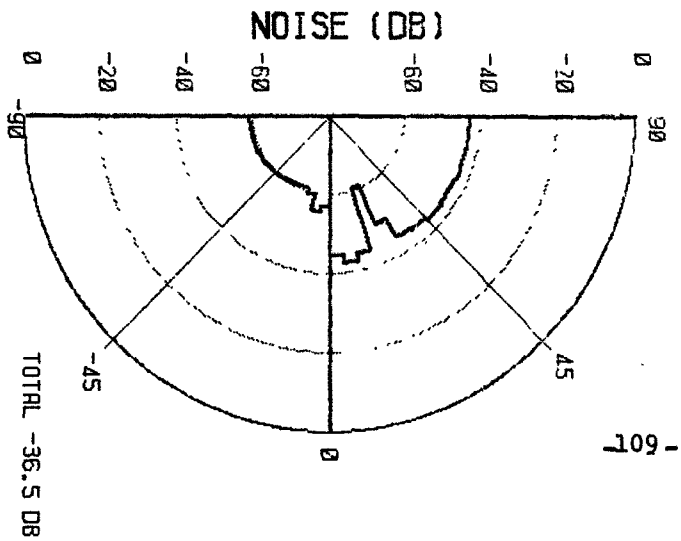
NOISE (DB)

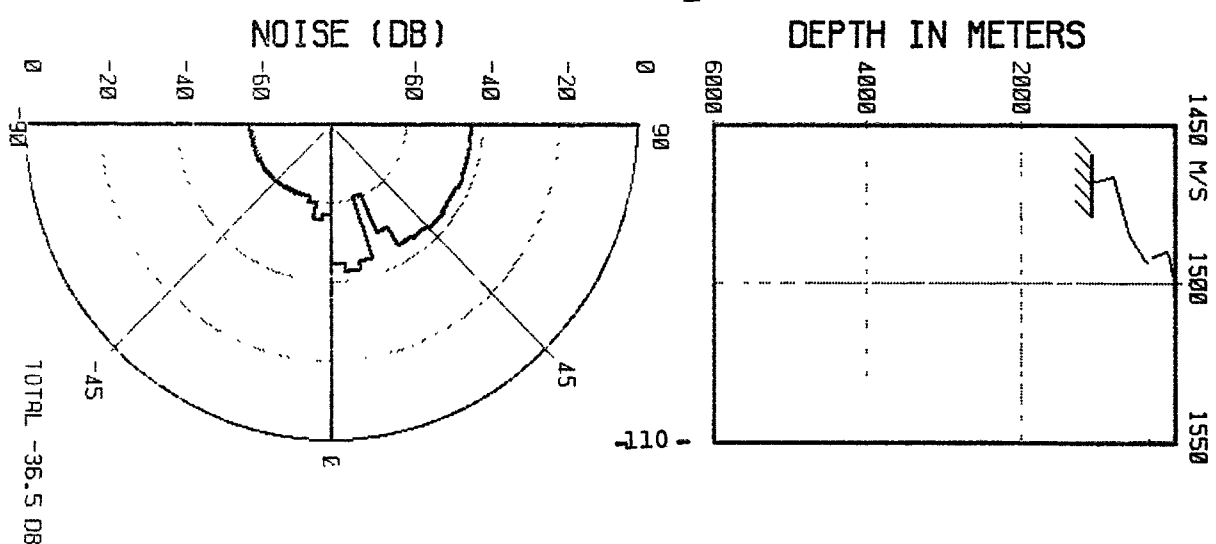
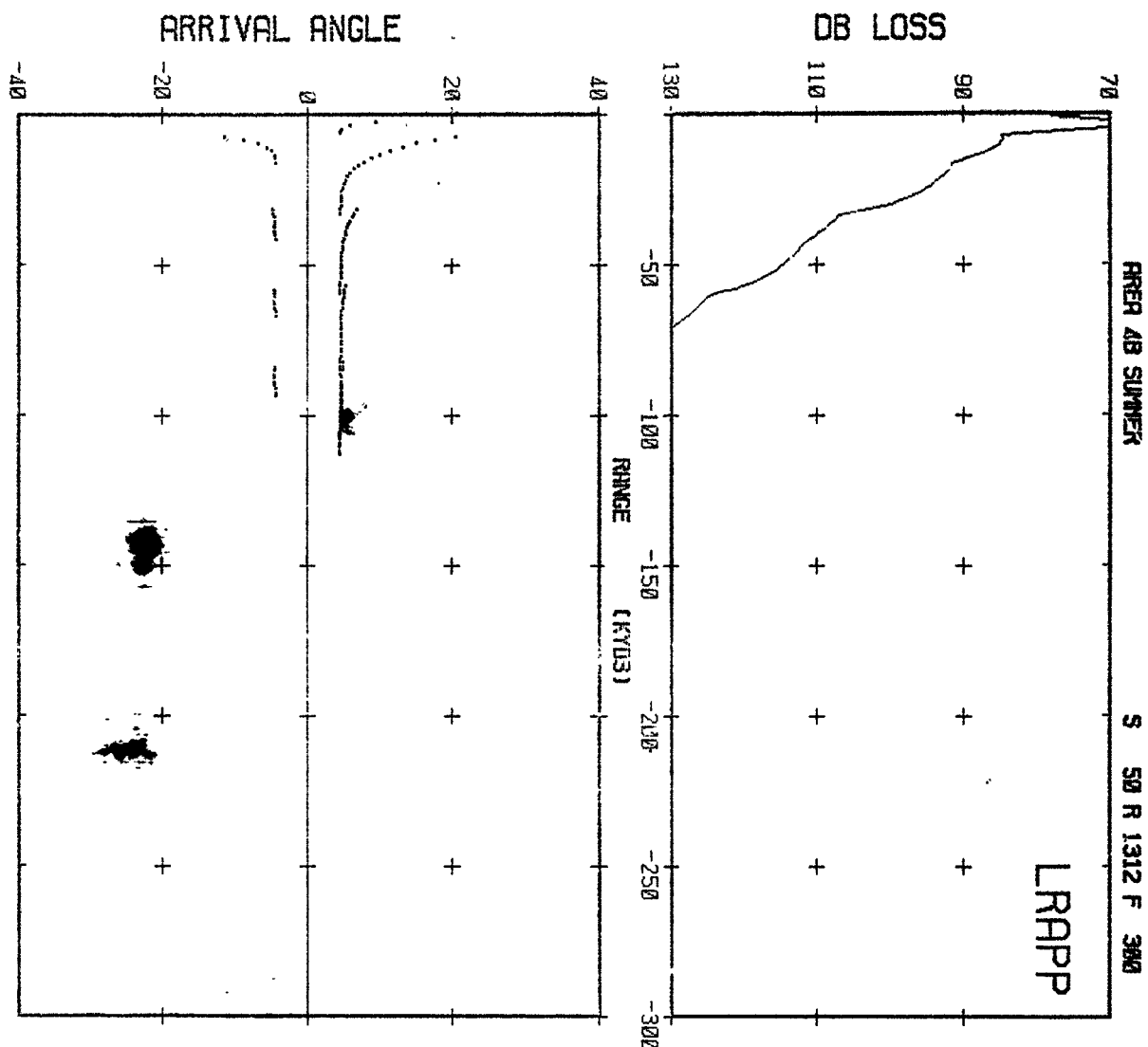


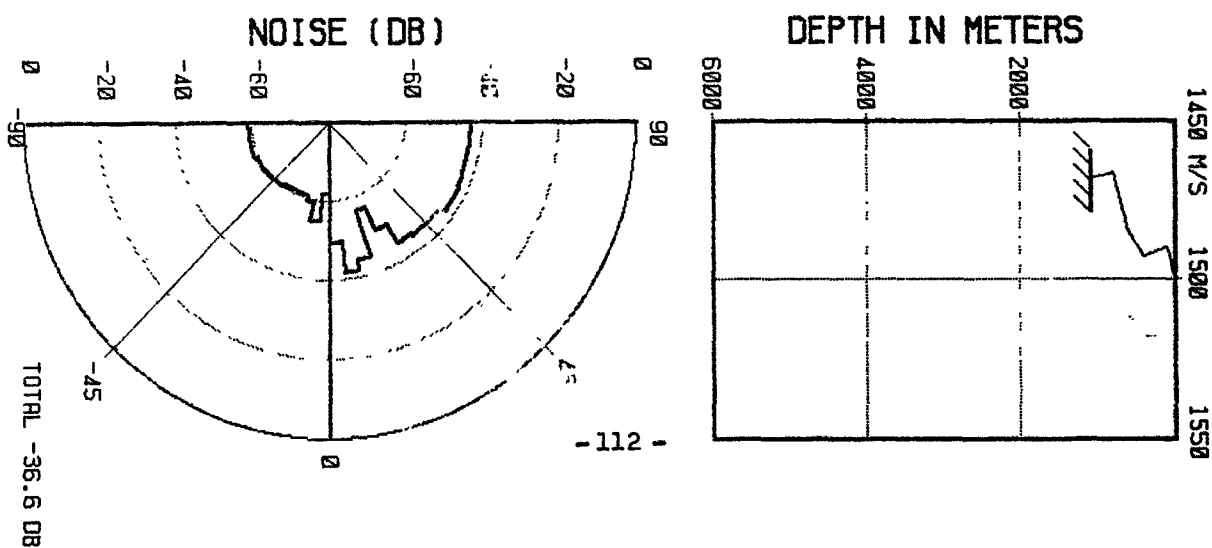
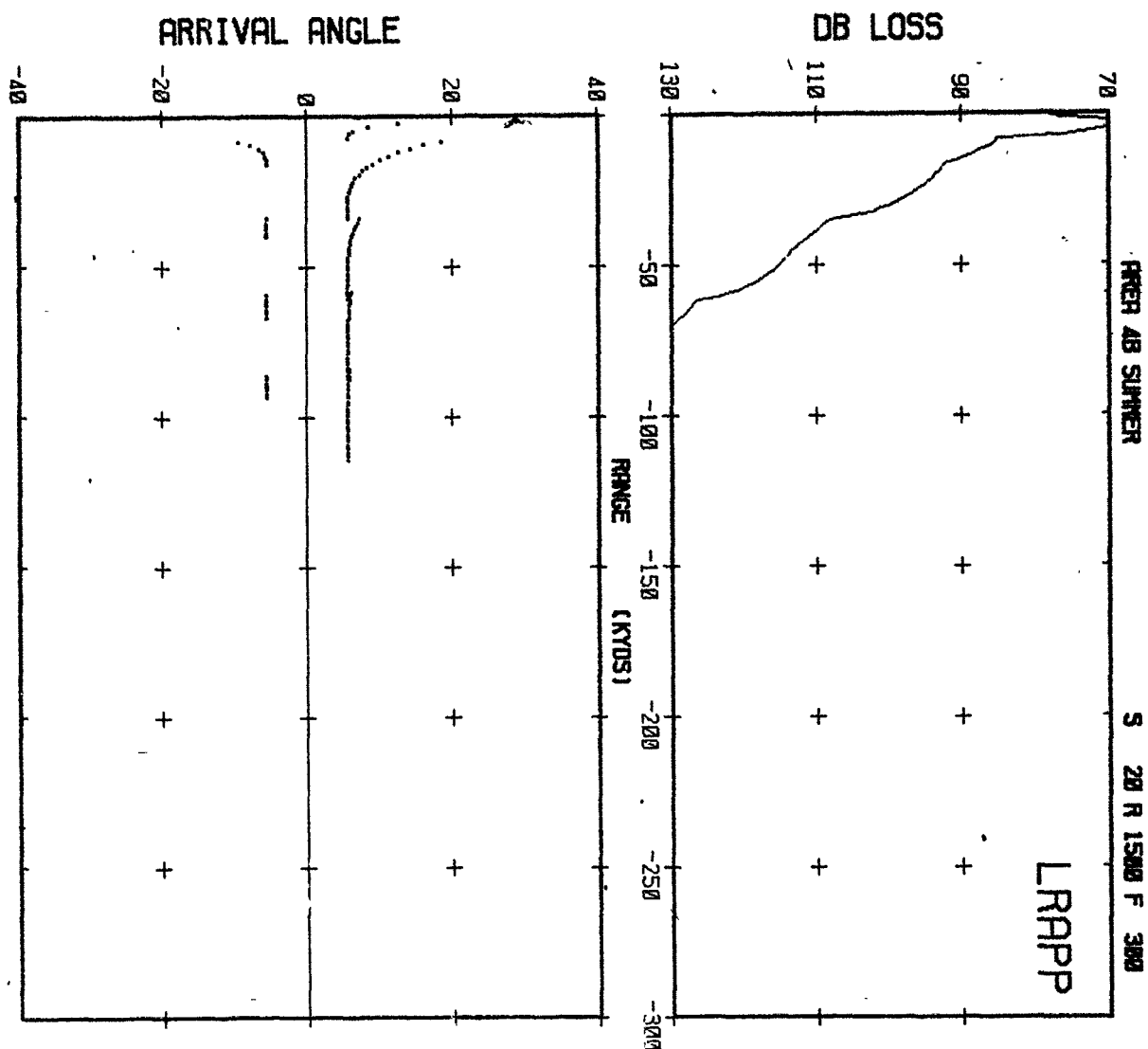


2000

DATE	TIME	LOCATION
1970 M. 5	15:00	15:00





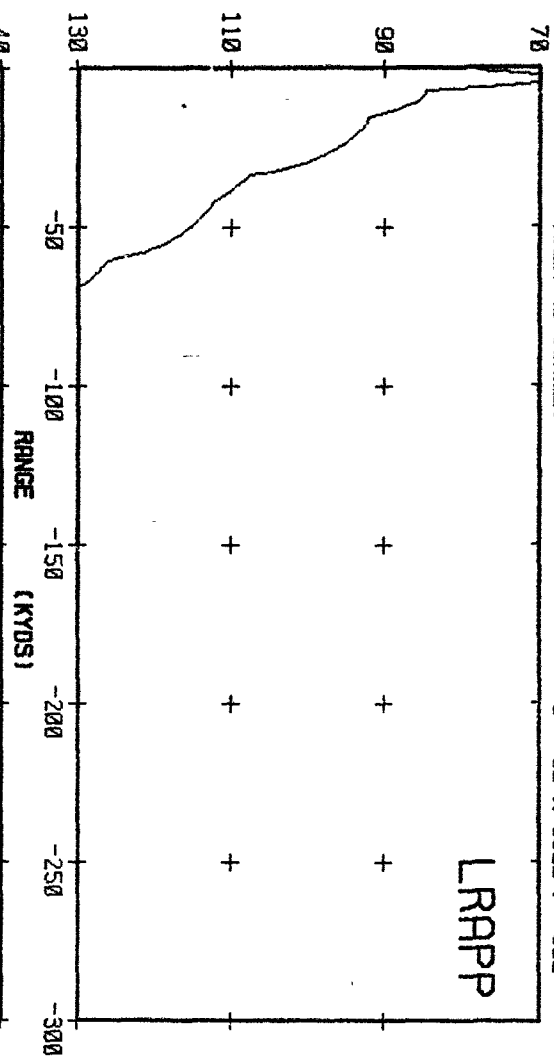


AREA 4B SUMMER

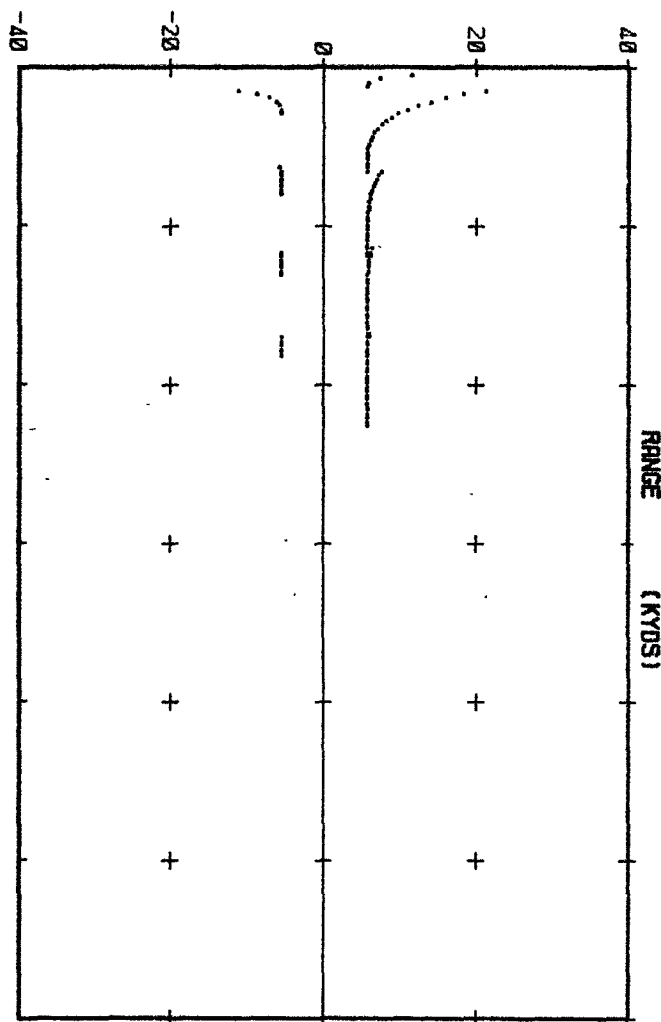
S 50 R 1500 F 300

1450 M/S 1500 1550

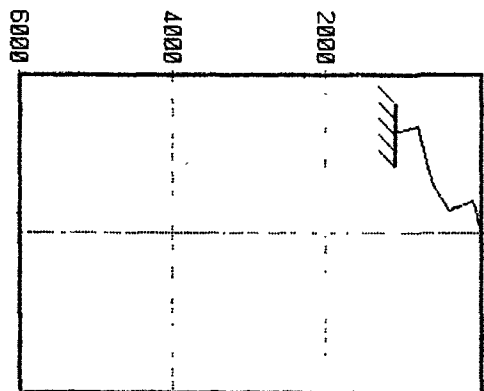
DB LOSS



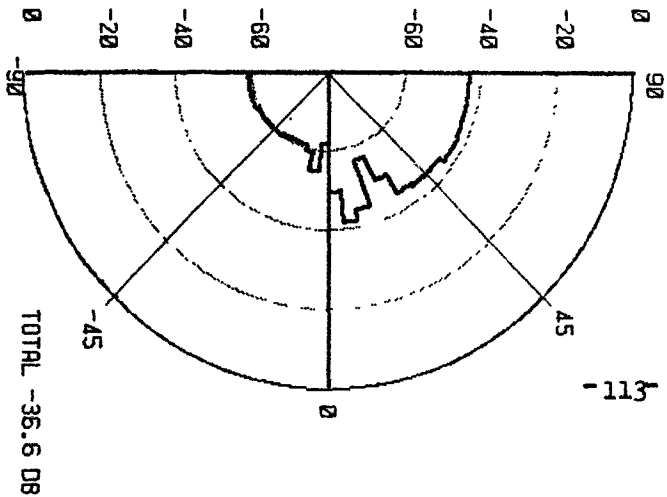
ARRIVAL ANGLE

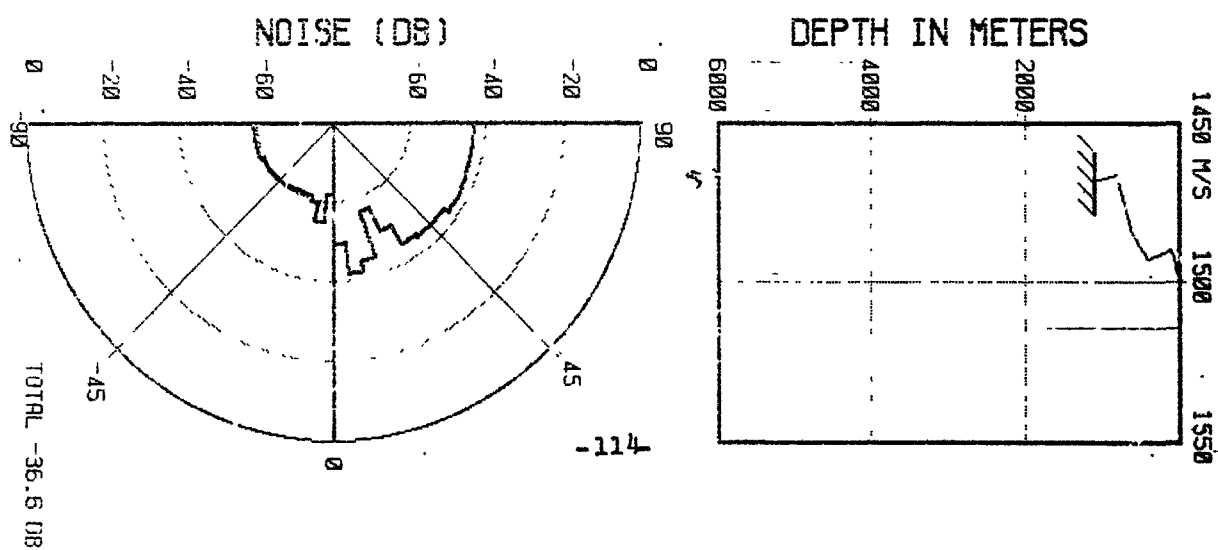
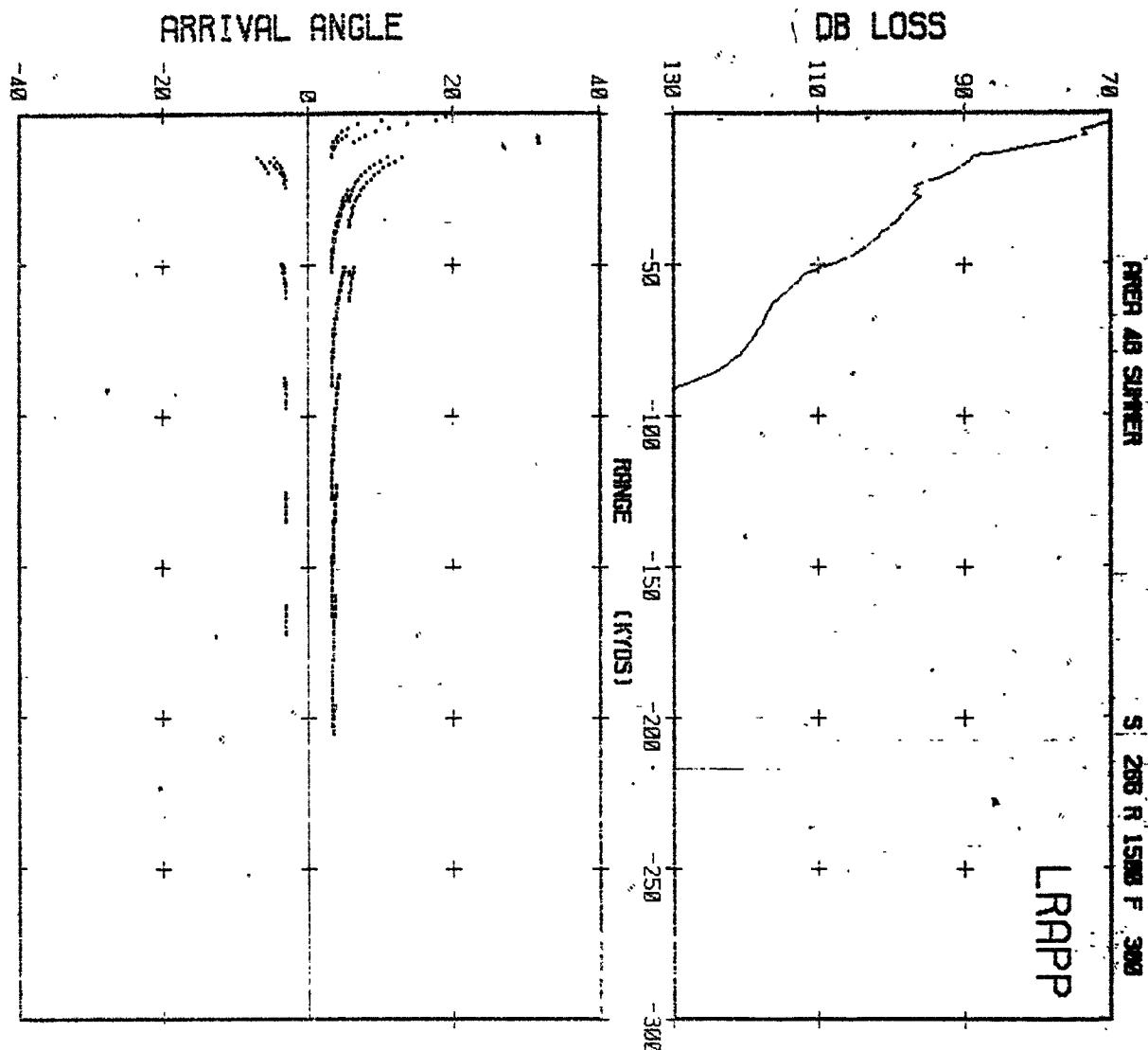


DEPTH IN METERS



NOISE (DB)





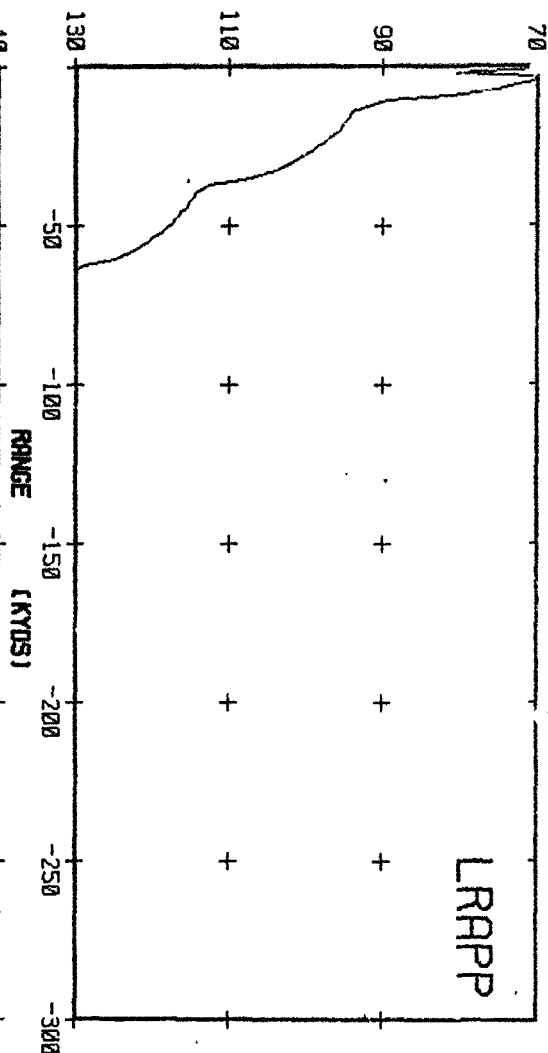
AREA 4B SUMMER

3 20 R 2625 F 300

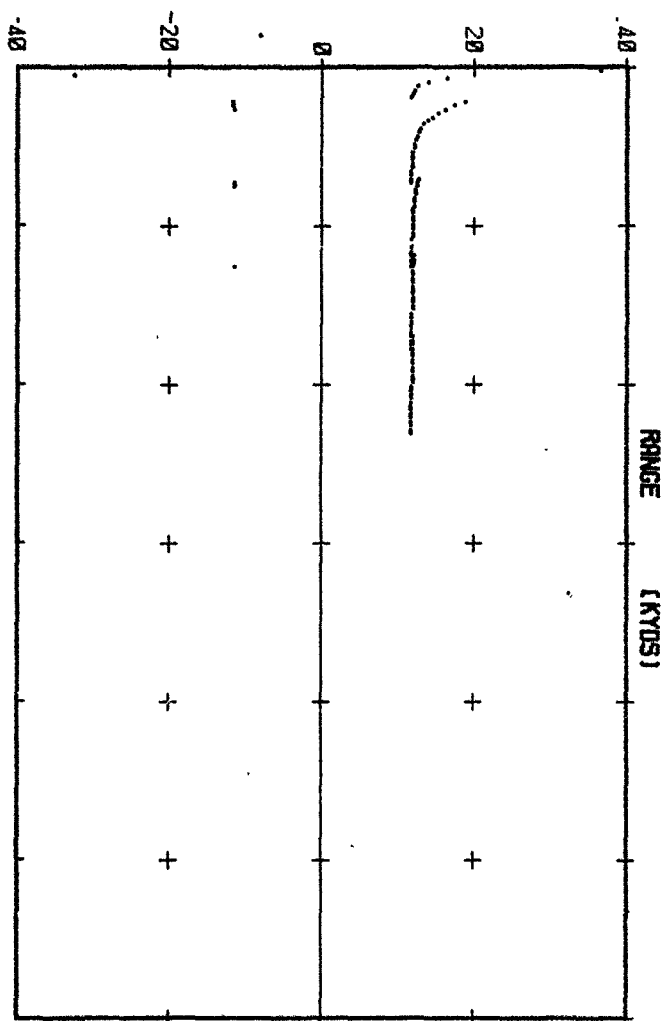
1450 M/S 1500

1550

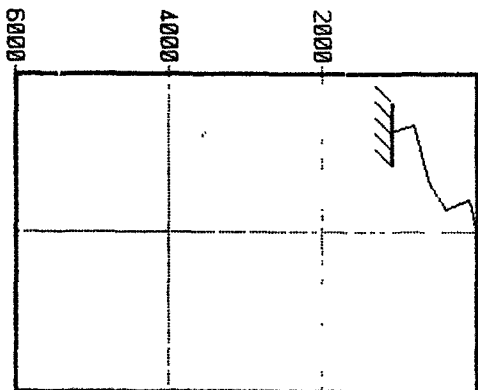
DB LOSS



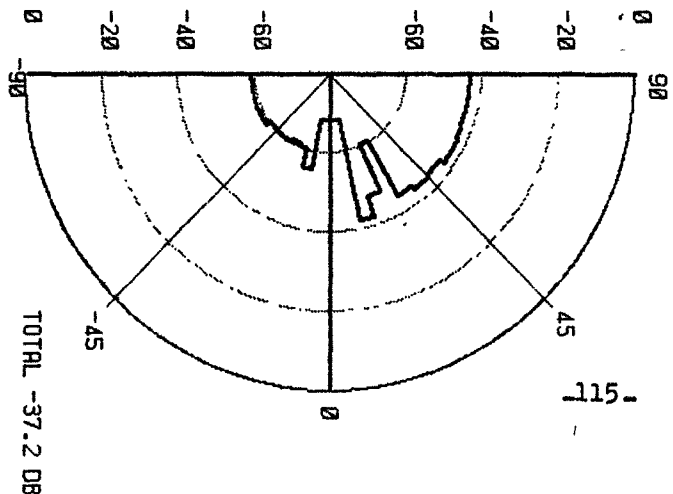
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



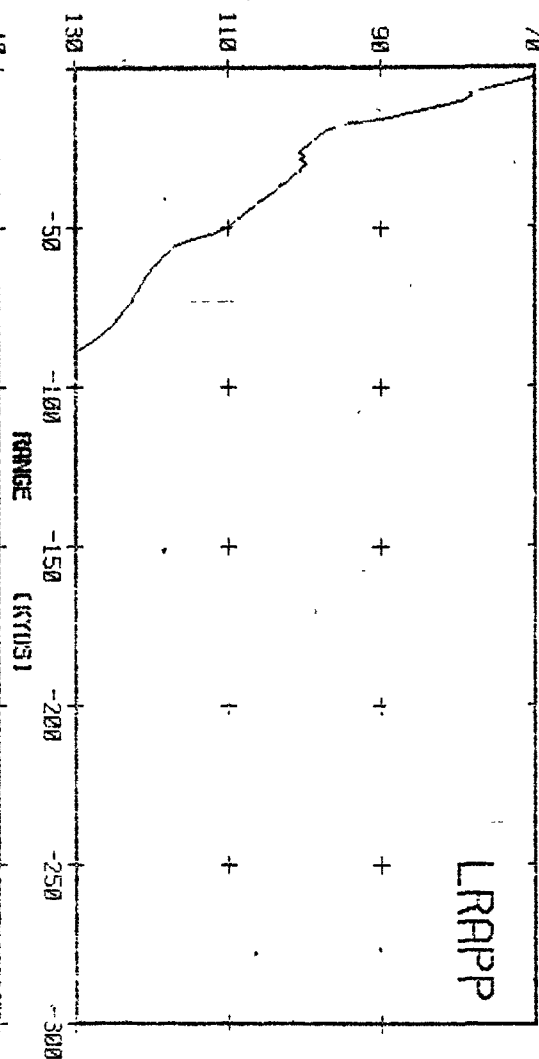
TOTAL -37.2 DB

AREA AB SUMMER

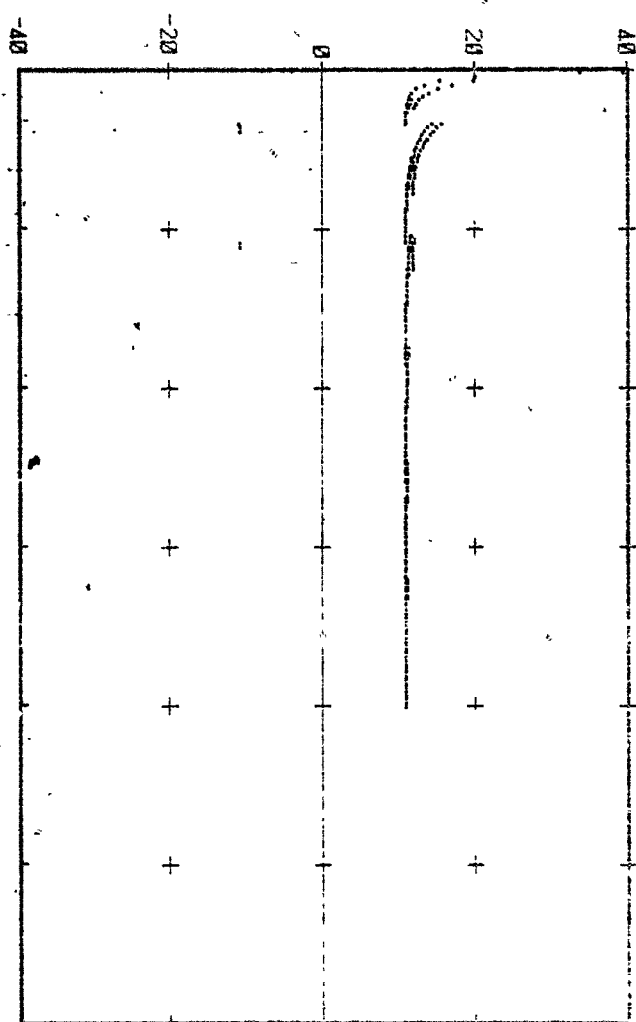
S 266 R 2625 F 380

1450 M/S 1500 1550

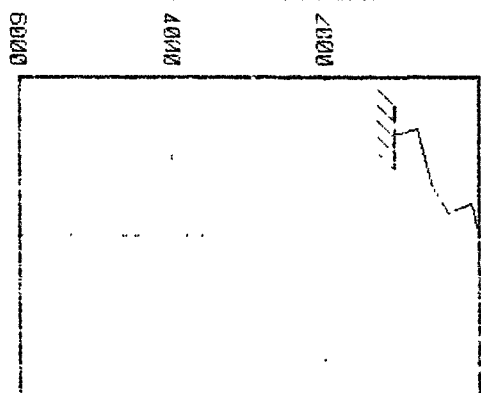
DB LOSS



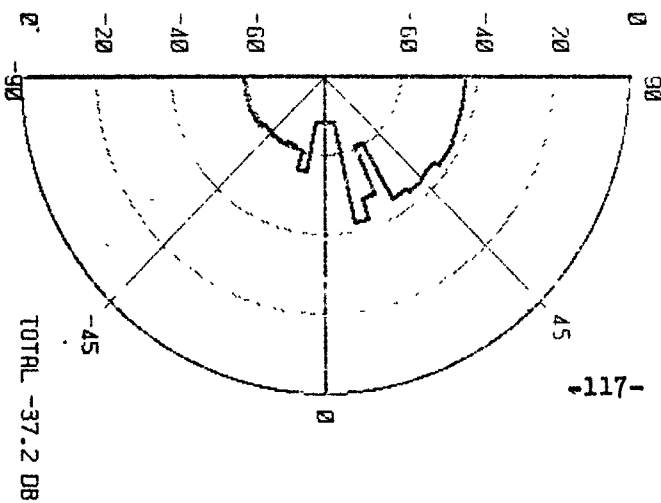
ARRIVAL ANGLE

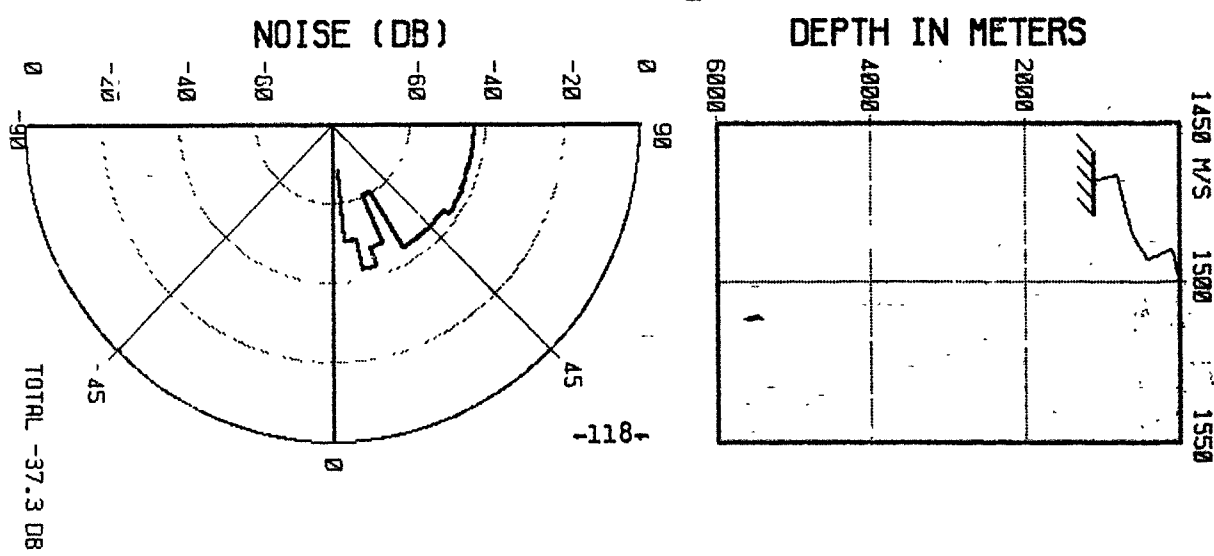
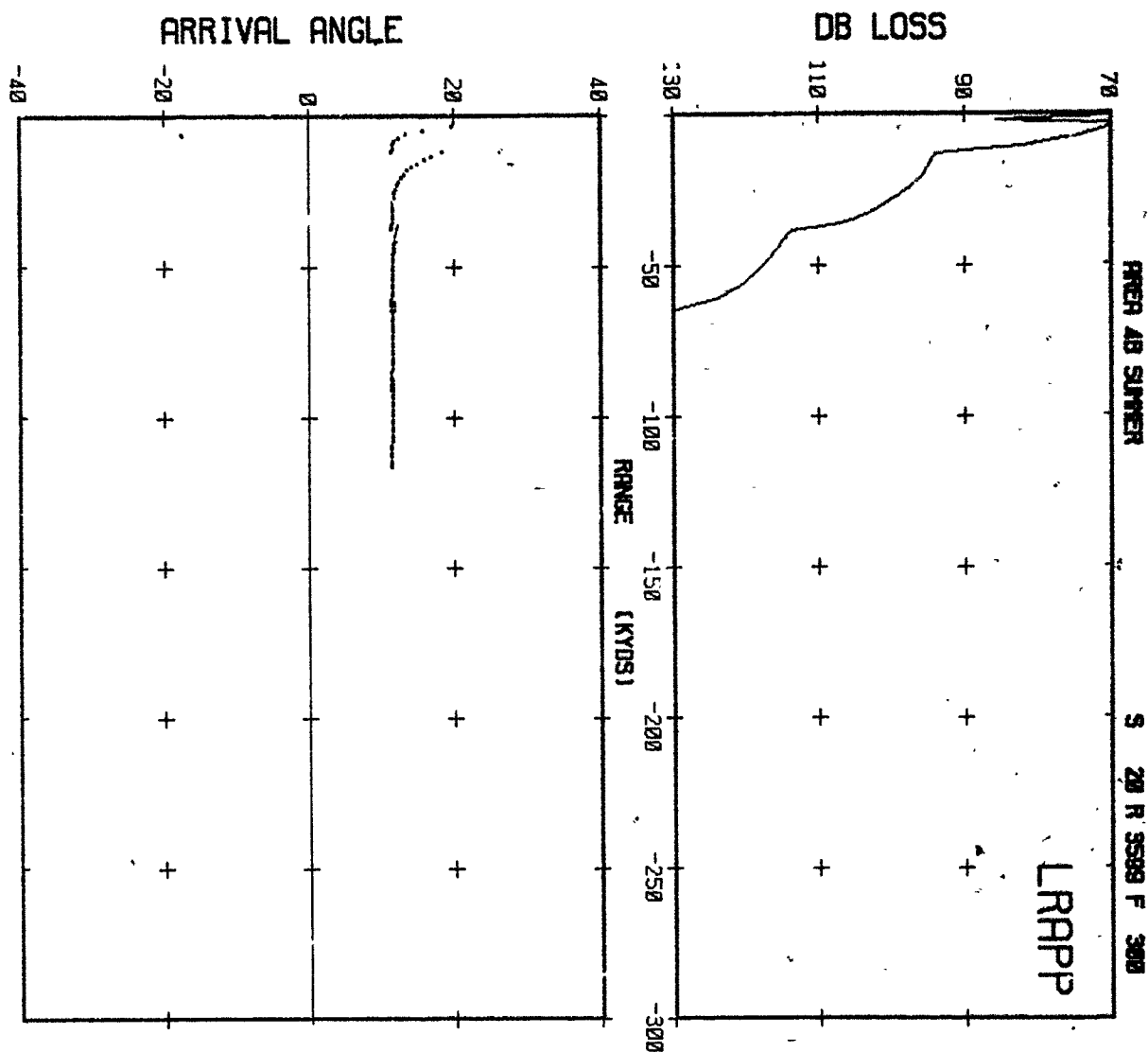
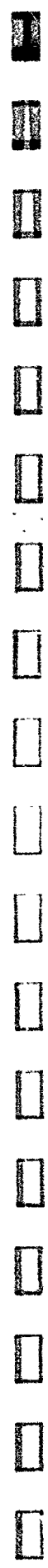


DEPTH IN METERS



NOISE (DB)





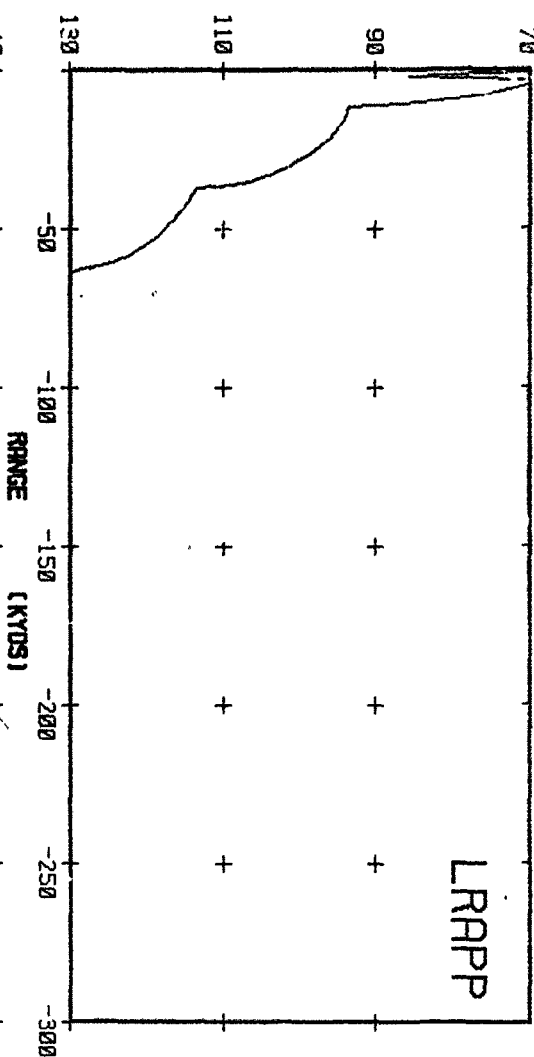
AREA 4B SUMMER

3 50 R 9509 F 300

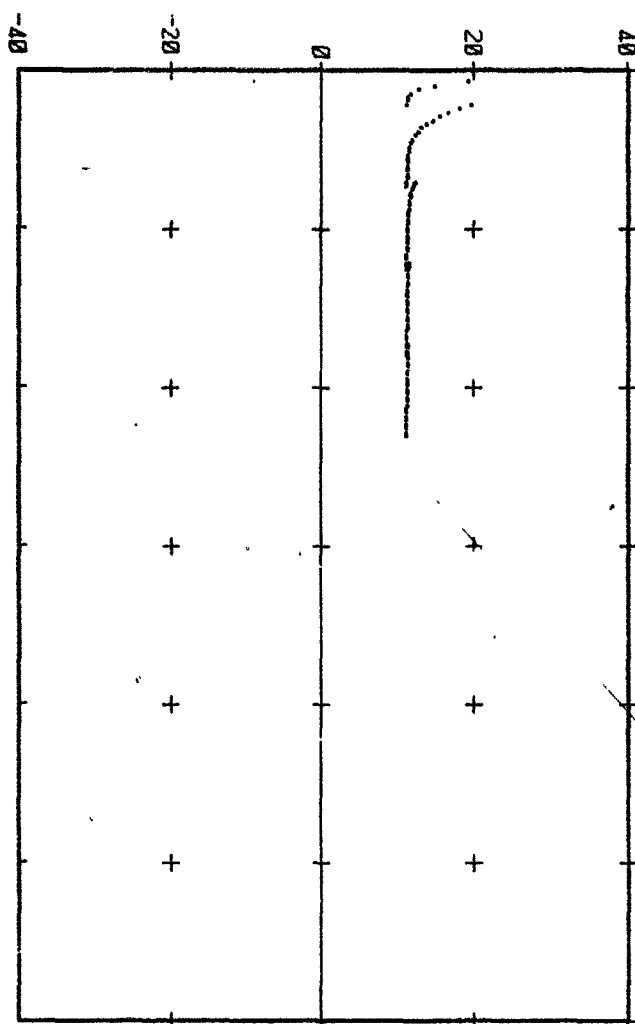
1450 M/S 1500

1550

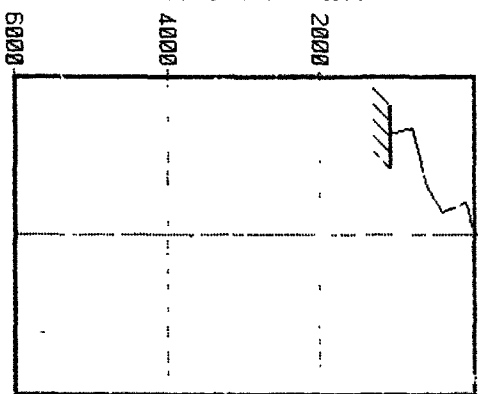
DB LOSS



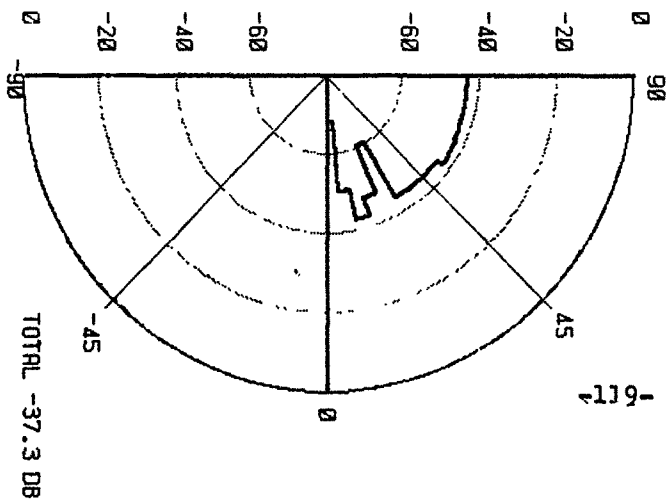
ARRIVAL ANGLE

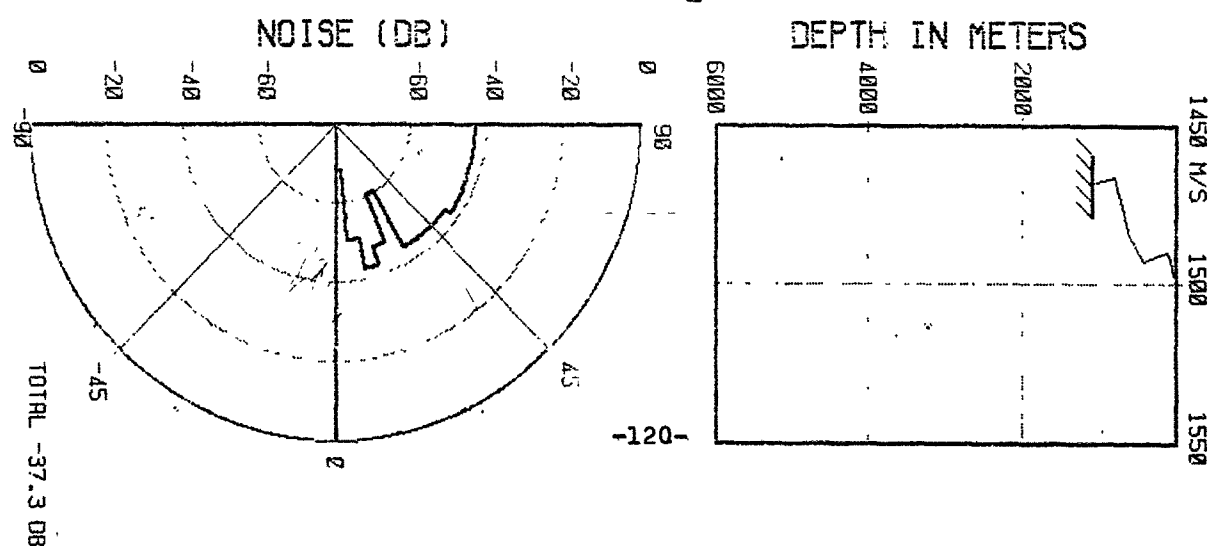
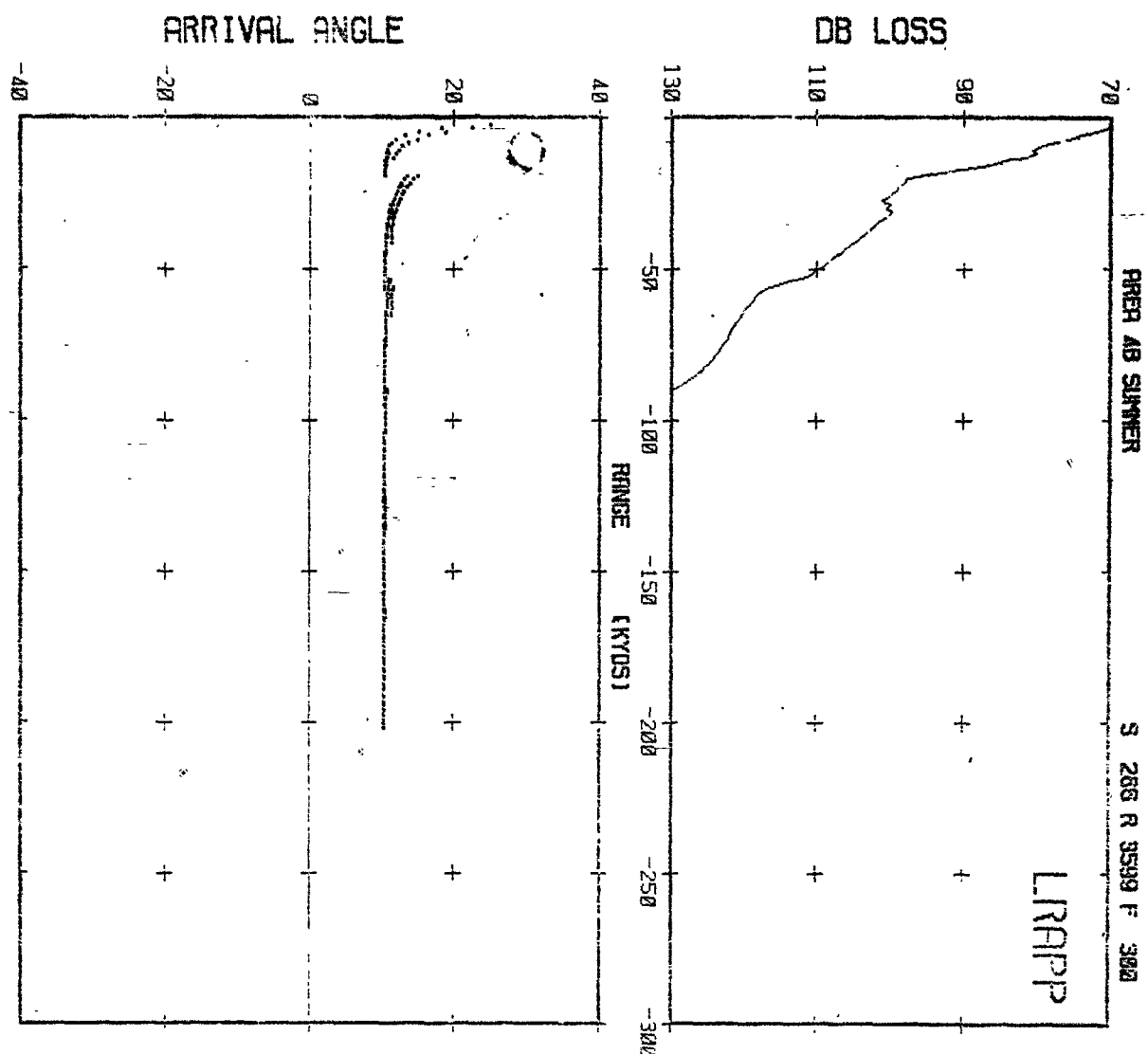


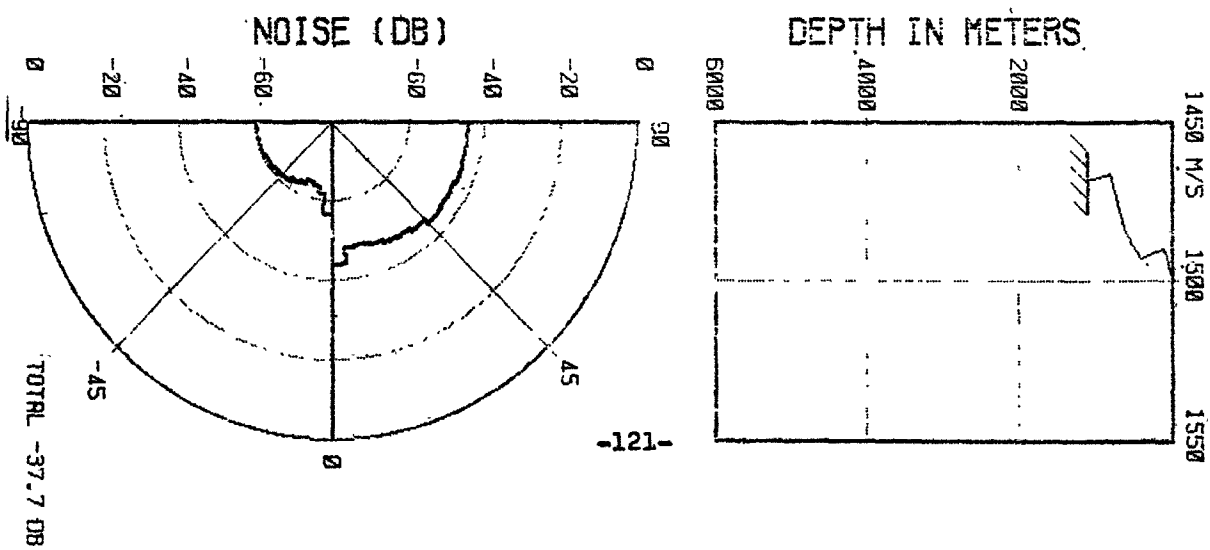
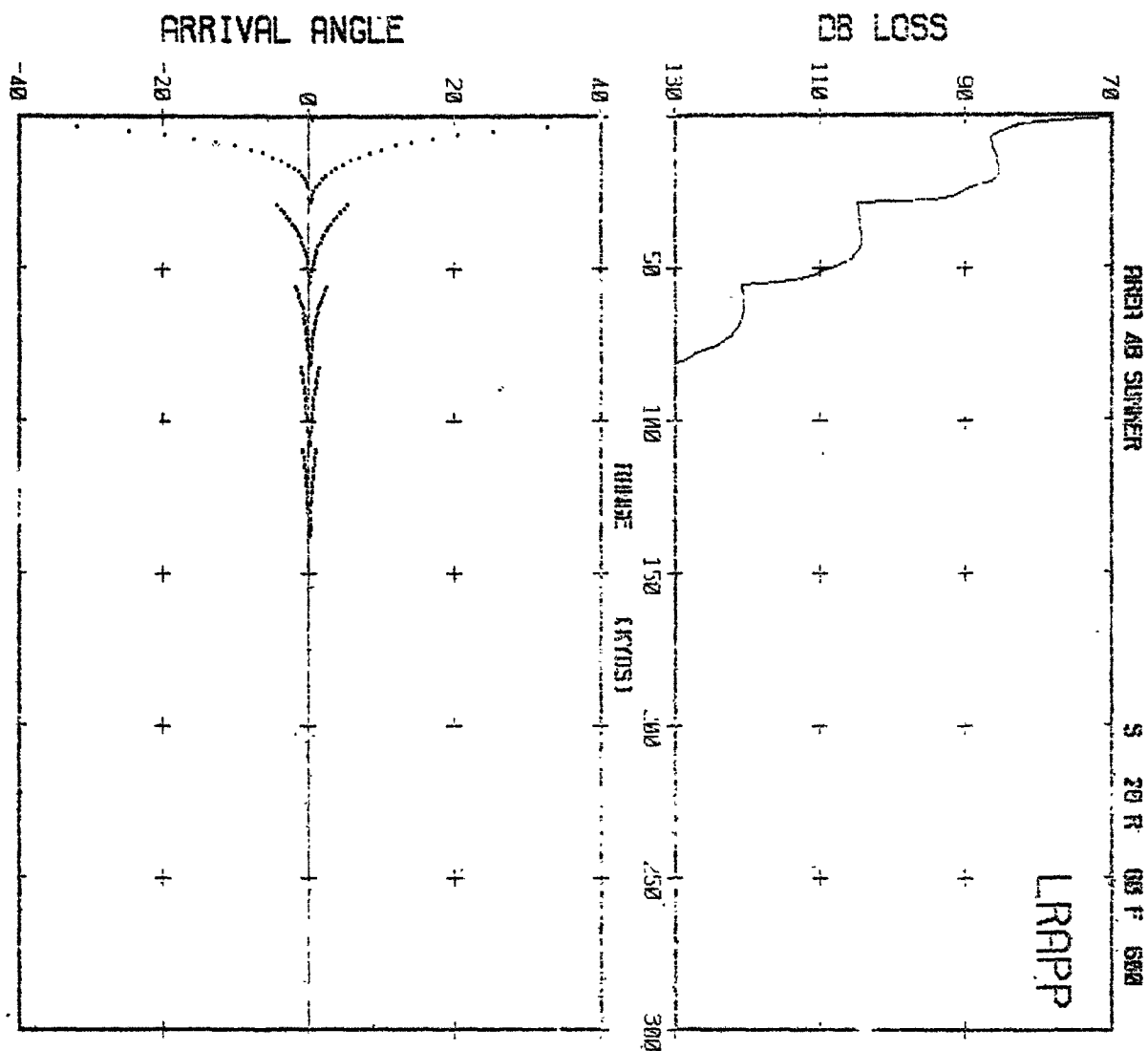
DEPTH IN METERS

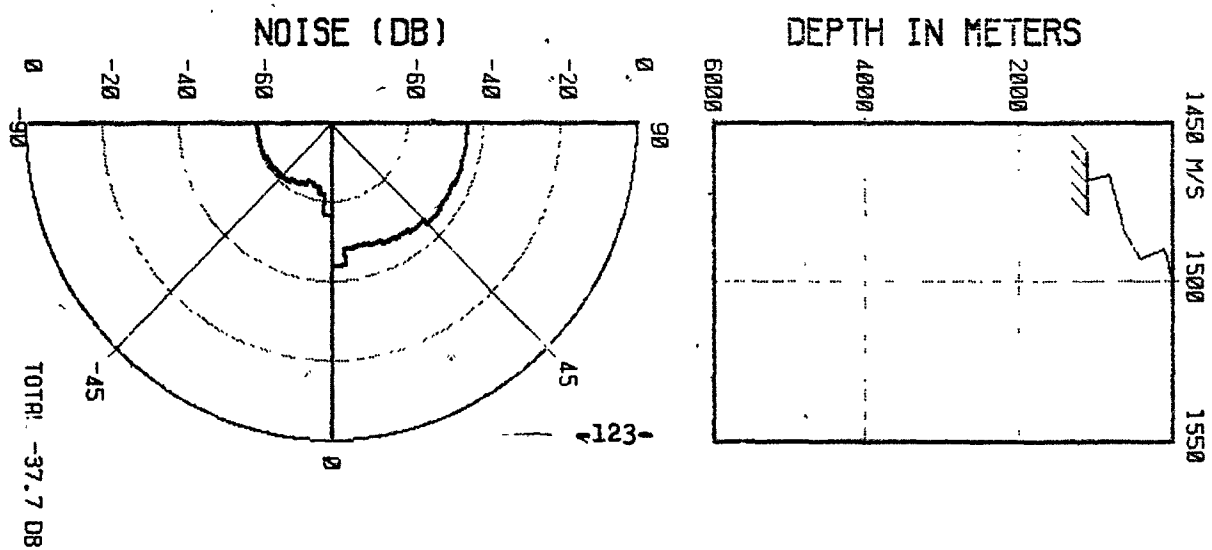
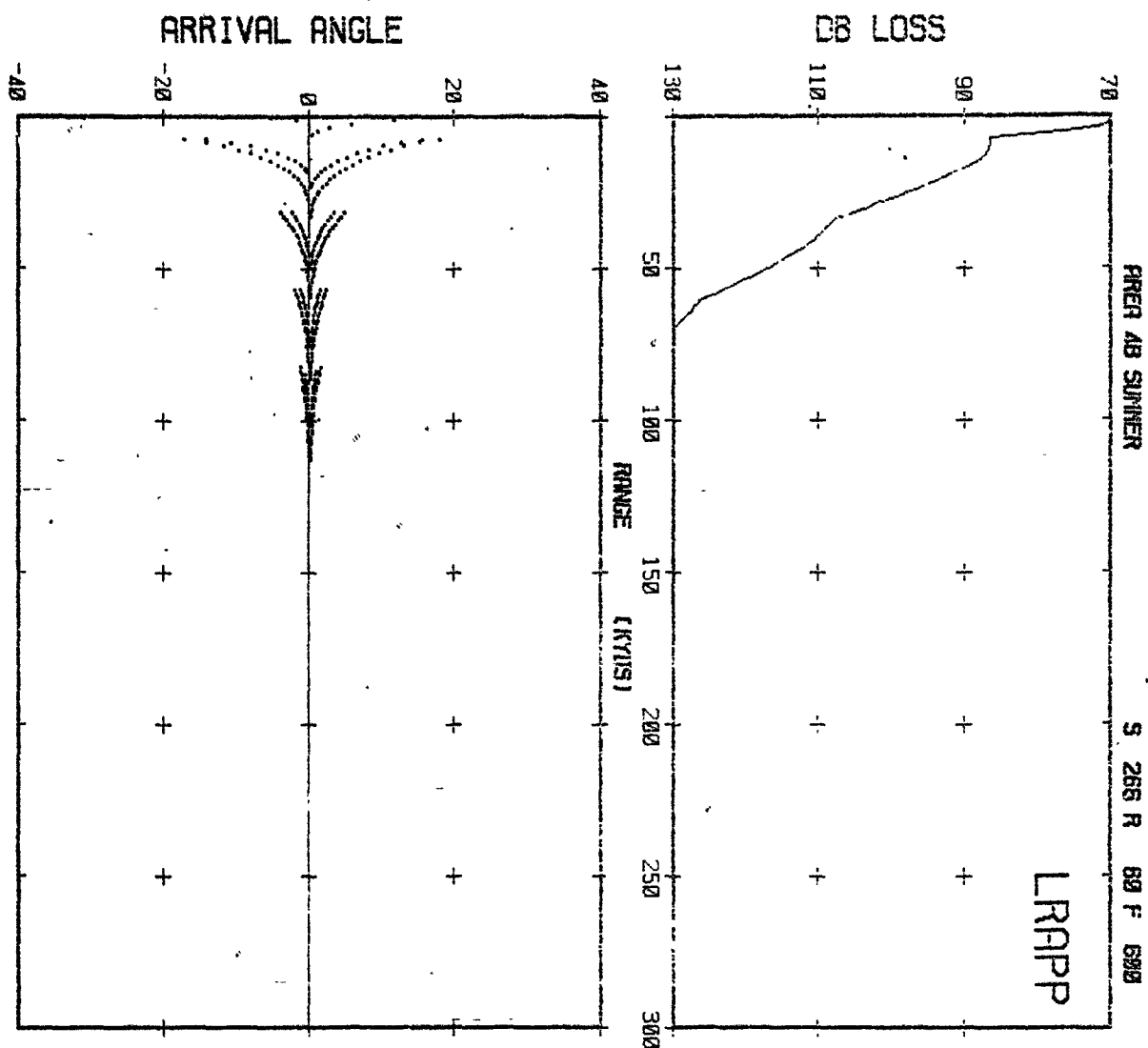


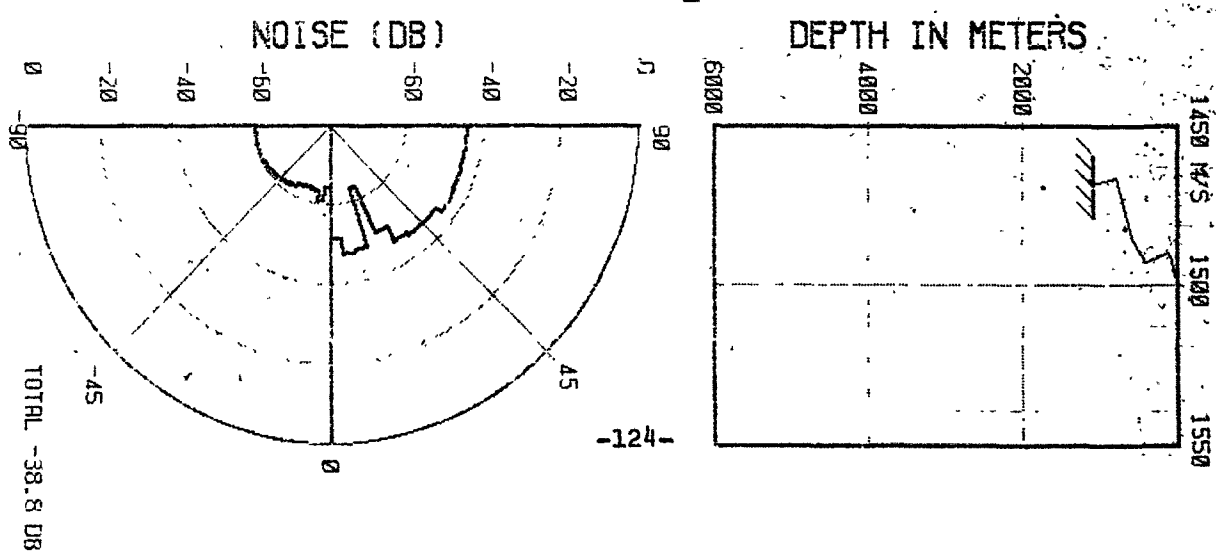
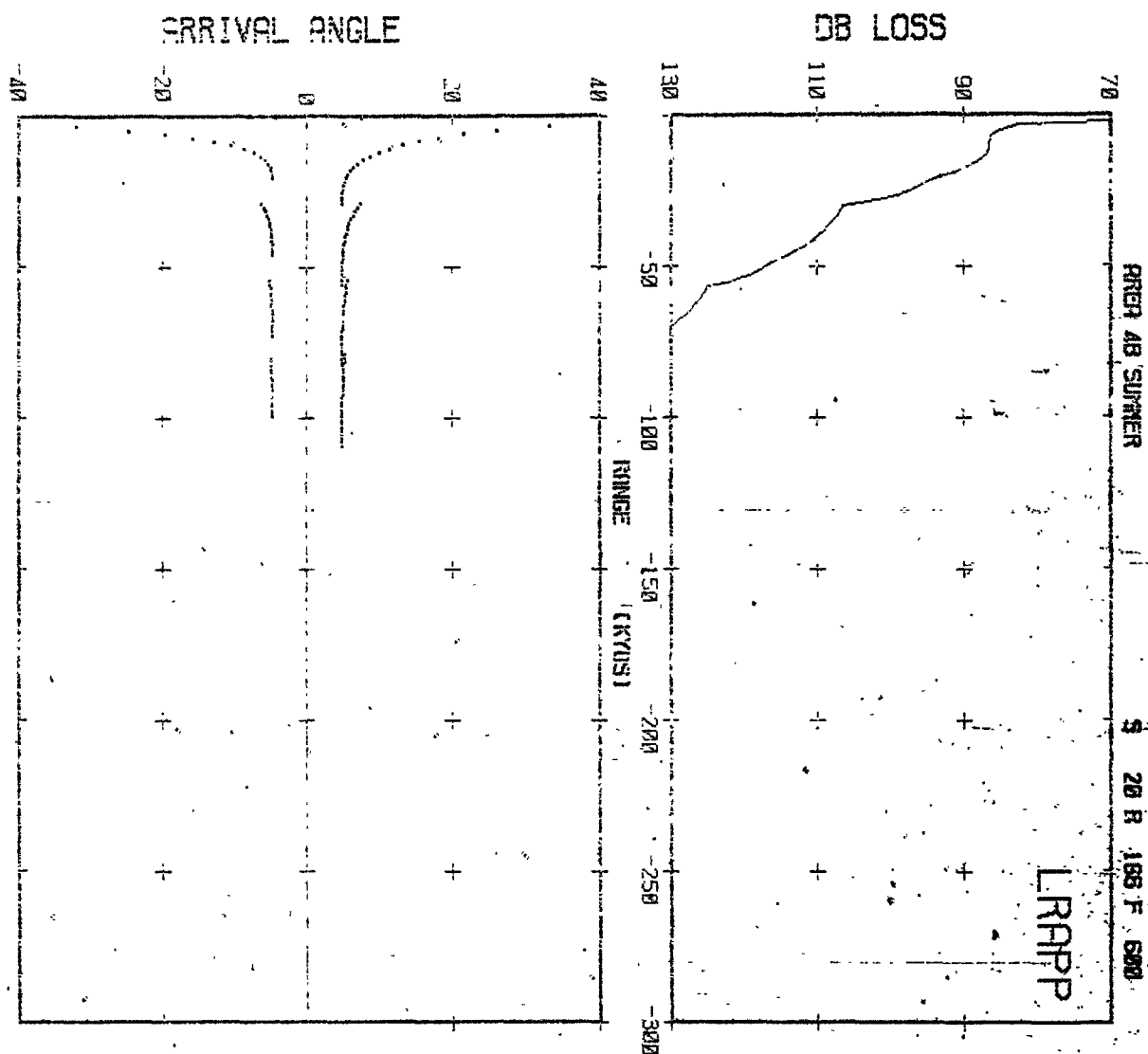
NOISE (DB)

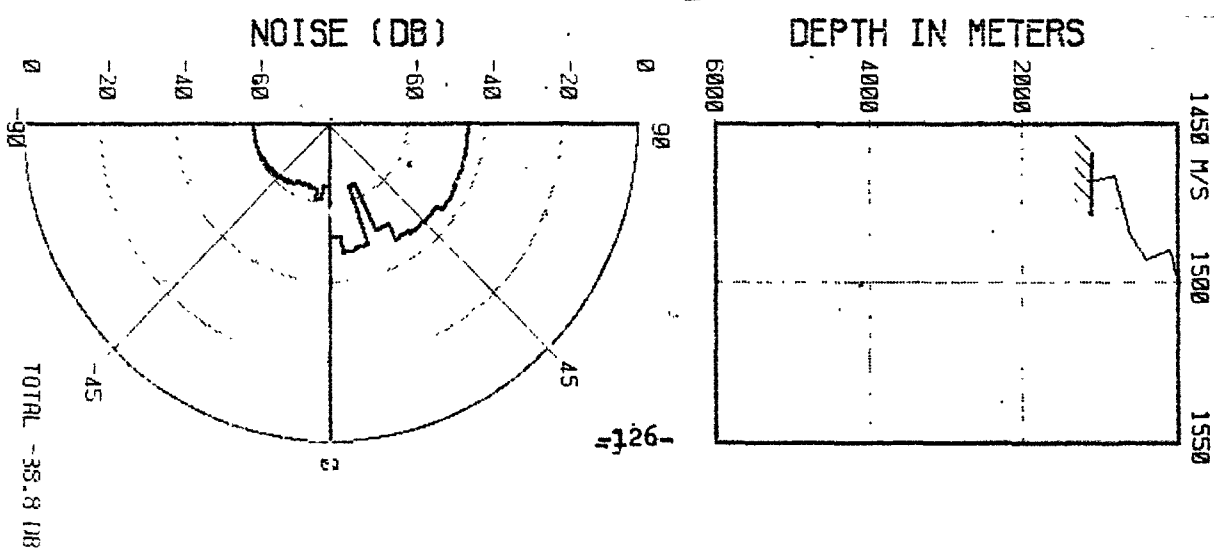
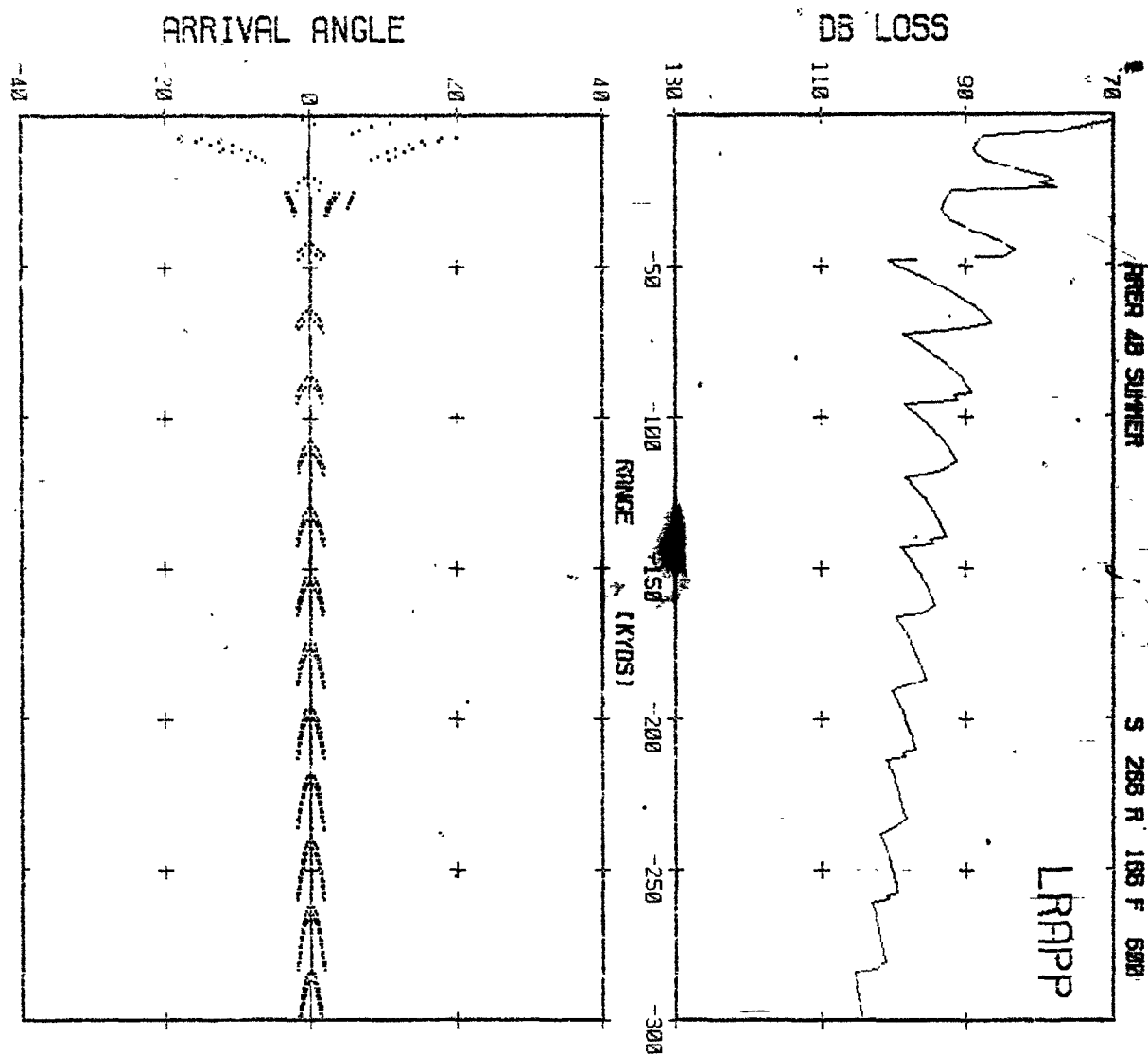


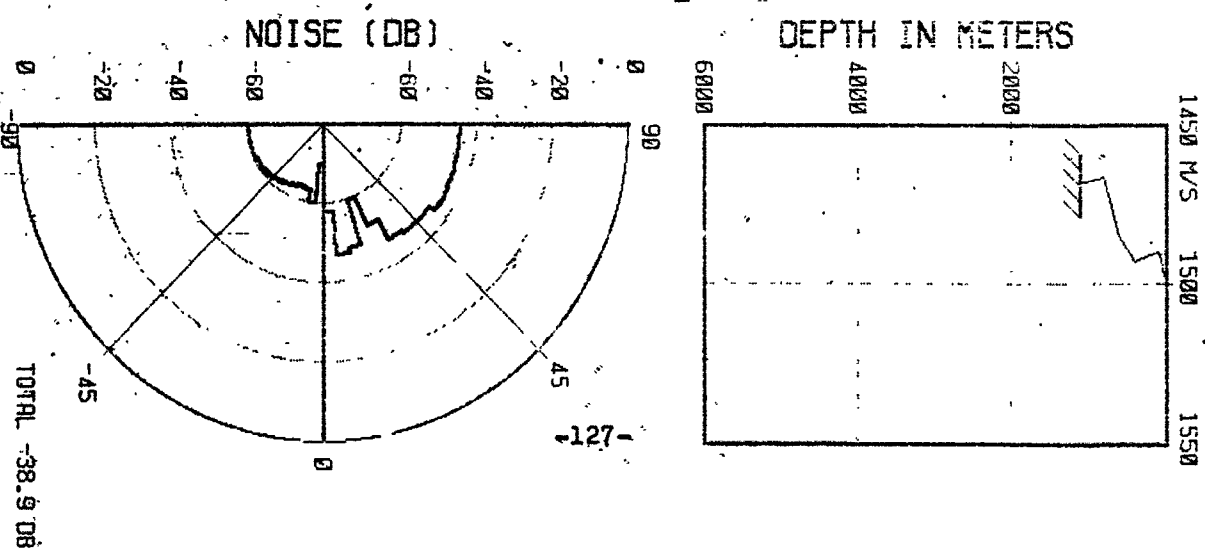
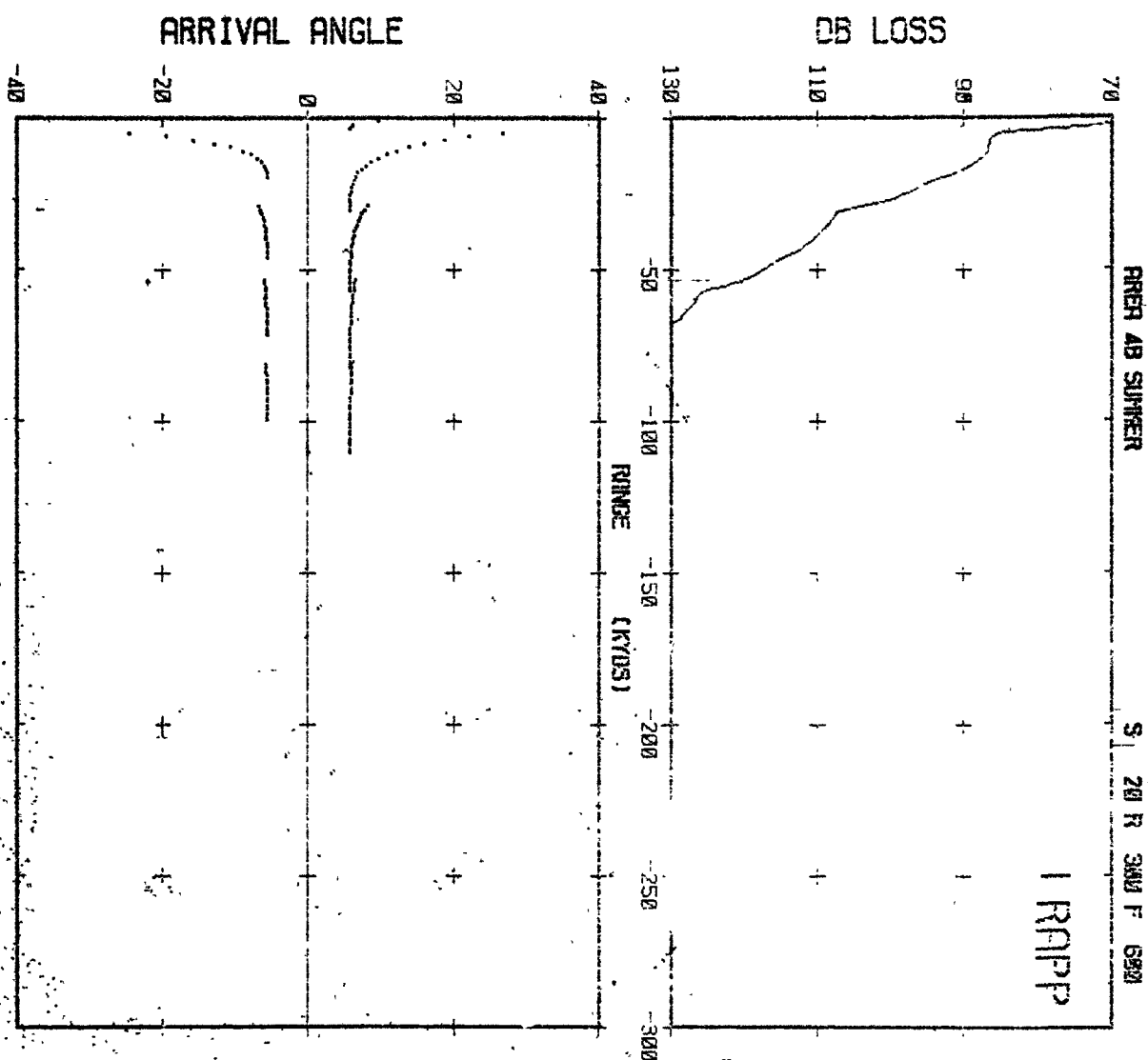












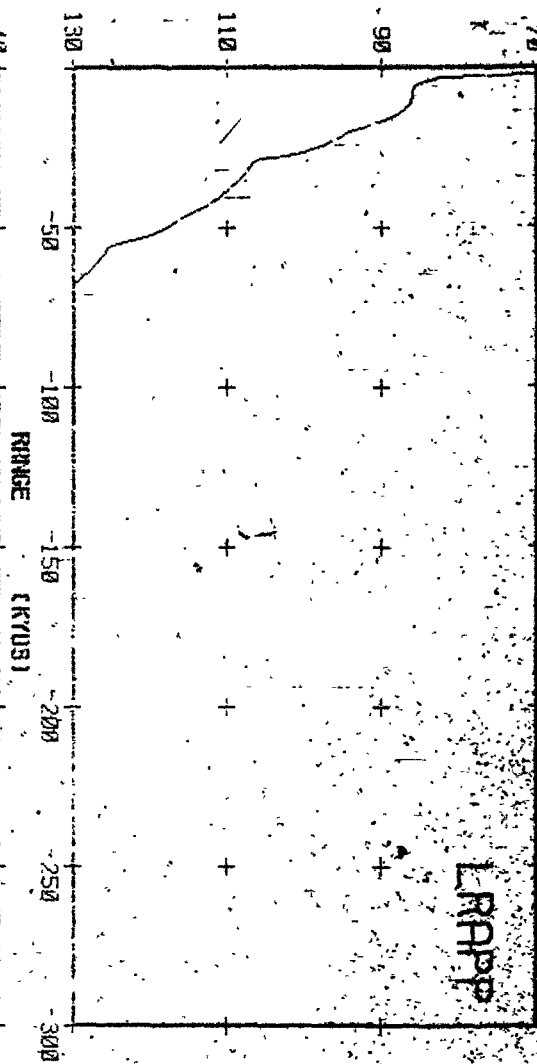
GREEN AB SUMMER

9:00 H. 300 F. 600

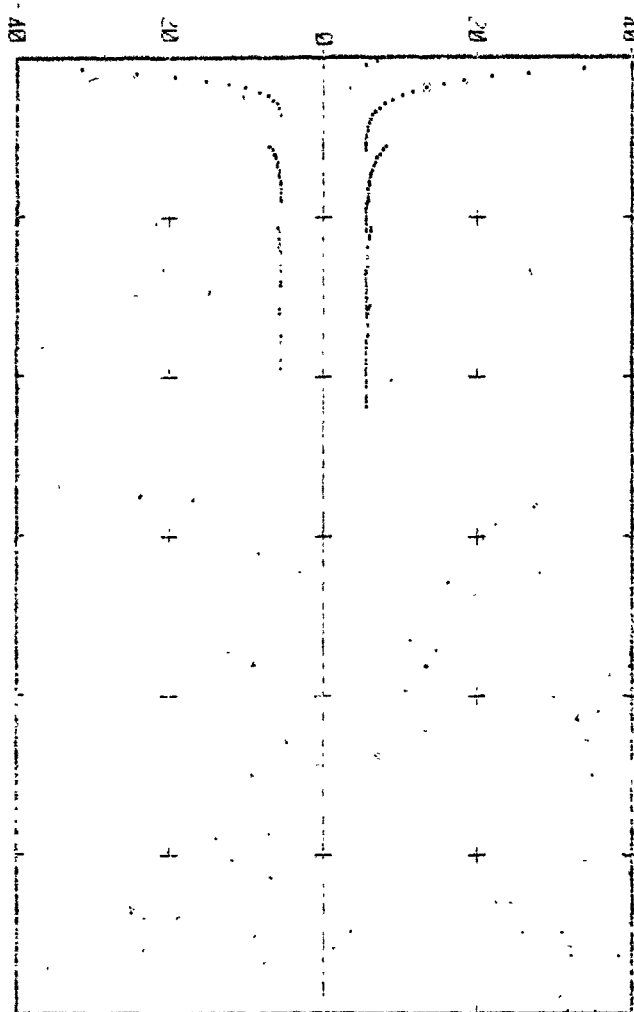
1450 M/S 1800

1550

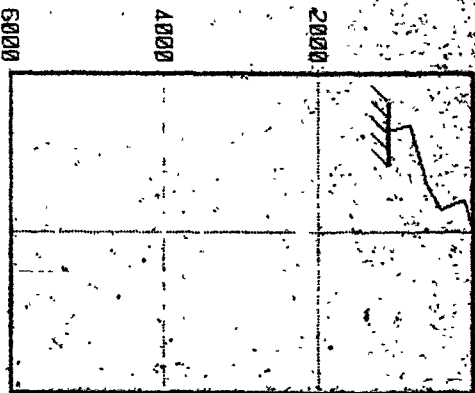
DB LOSS



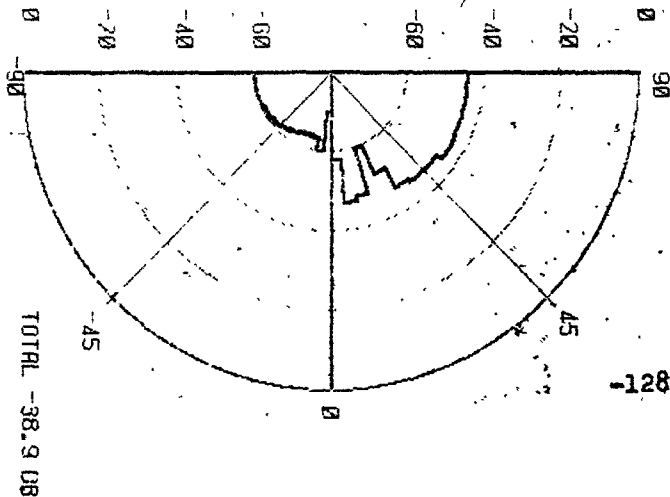
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

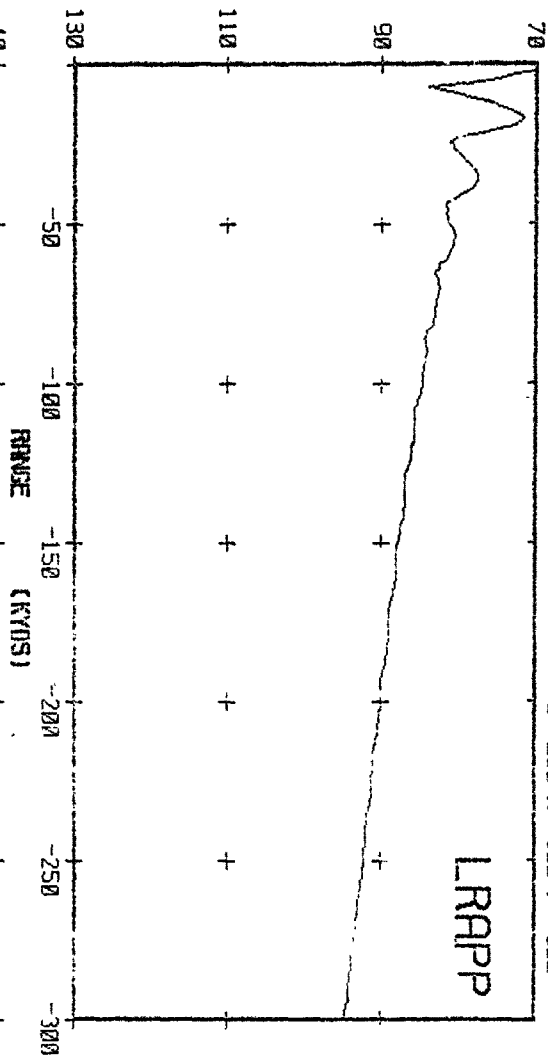


AREA AB SUMMER

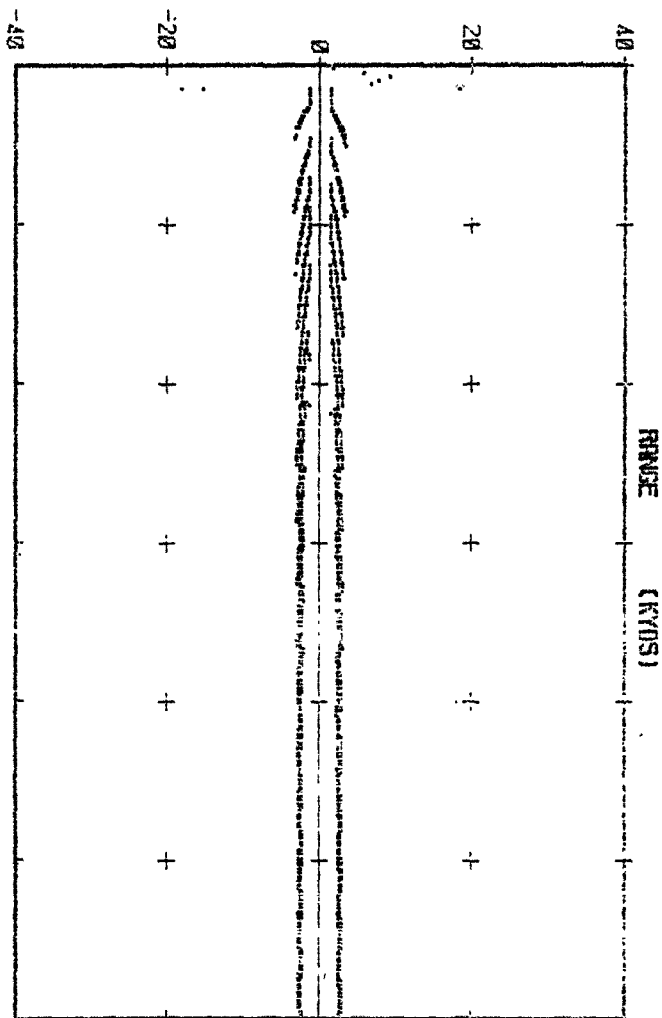
S 266 R 300 F 600

1450 M/S 1500 1550

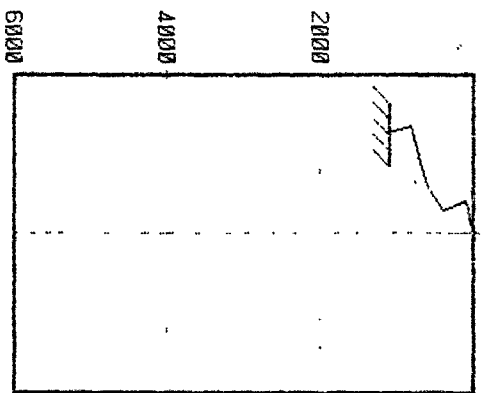
DB LOSS



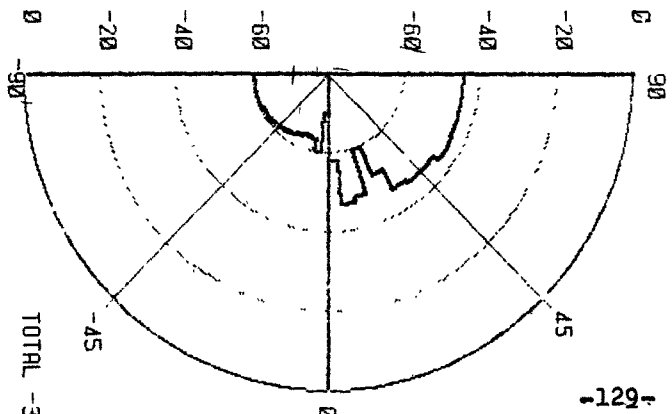
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



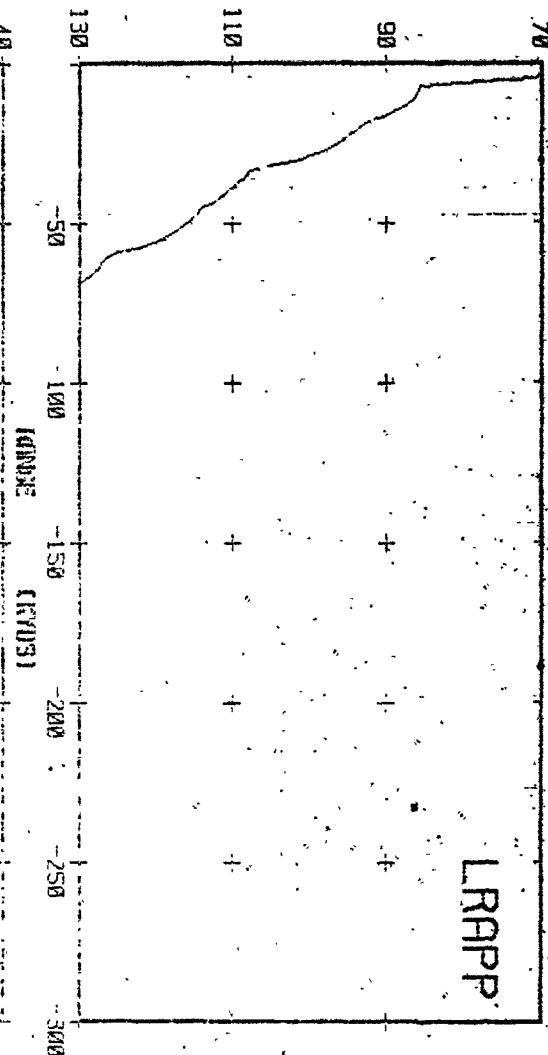
TOTAL -38.9 DB

ORDER AB SUMNER

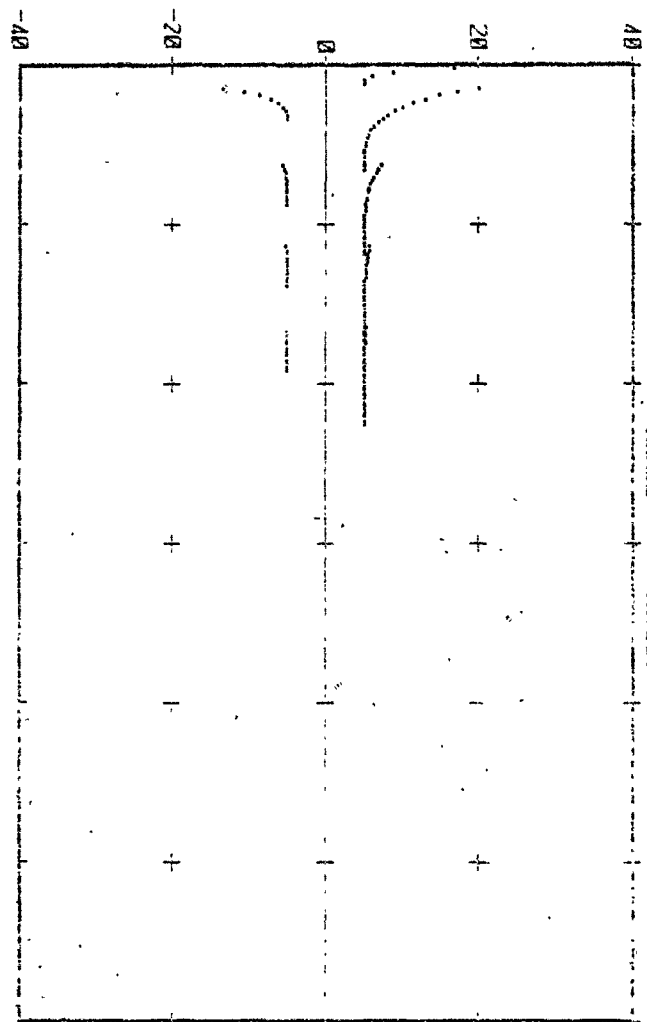
S 20 R 1000 F 600

1450 MYS 1500 1550

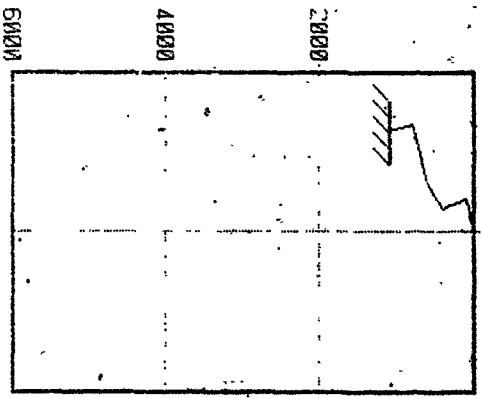
DB LOSS



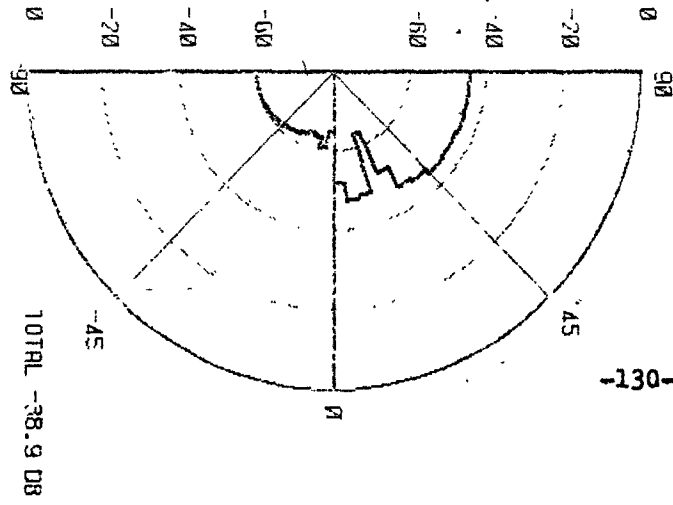
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

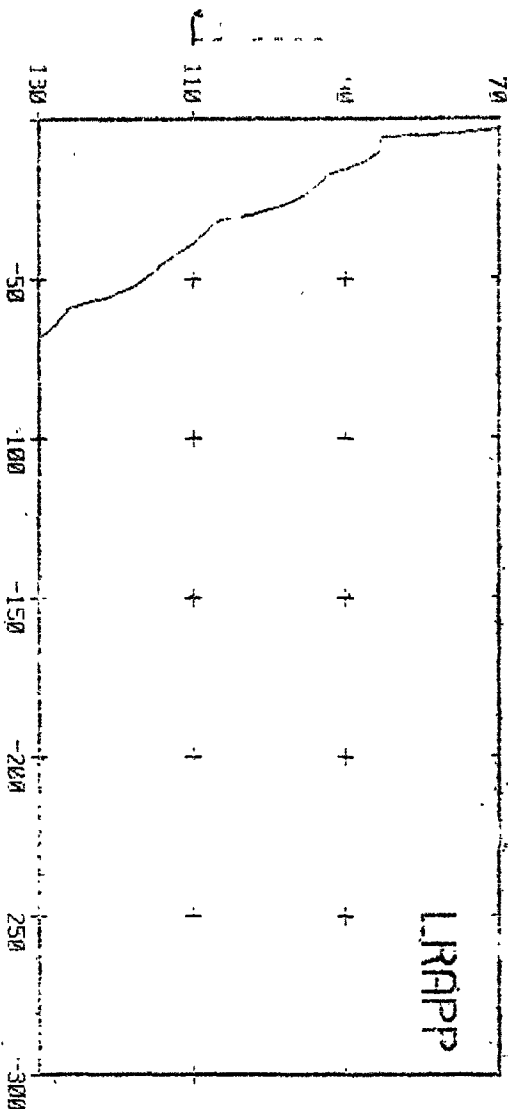


GREEN AB SUMMER

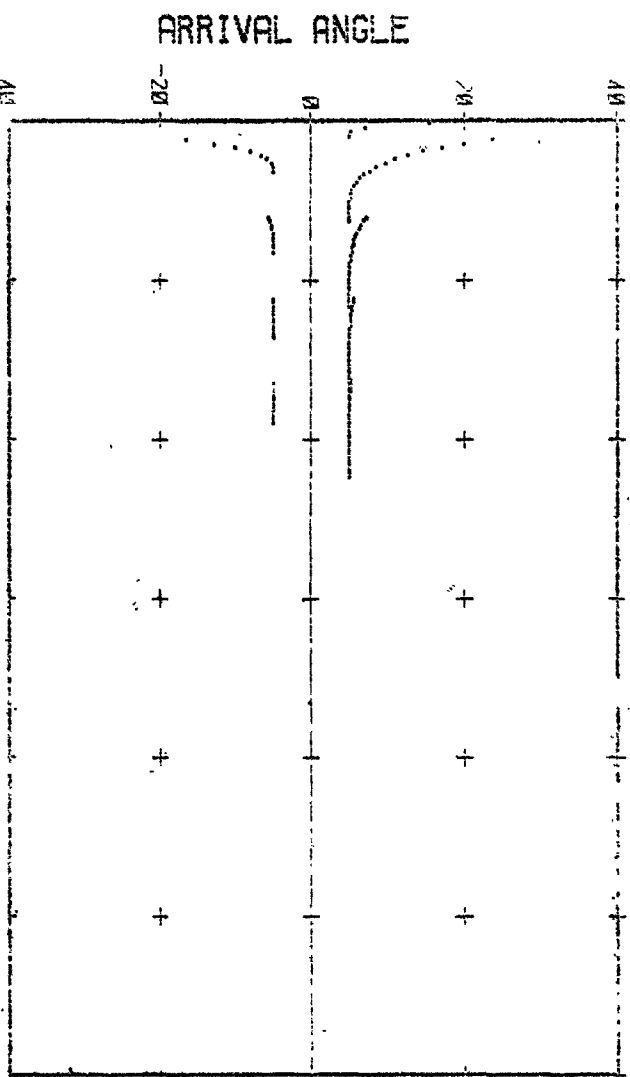
S 50 R 1000 F 600

1450 M/S 1500 1550

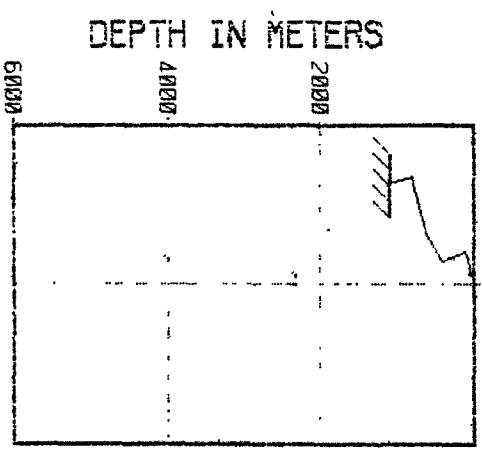
LRAPP



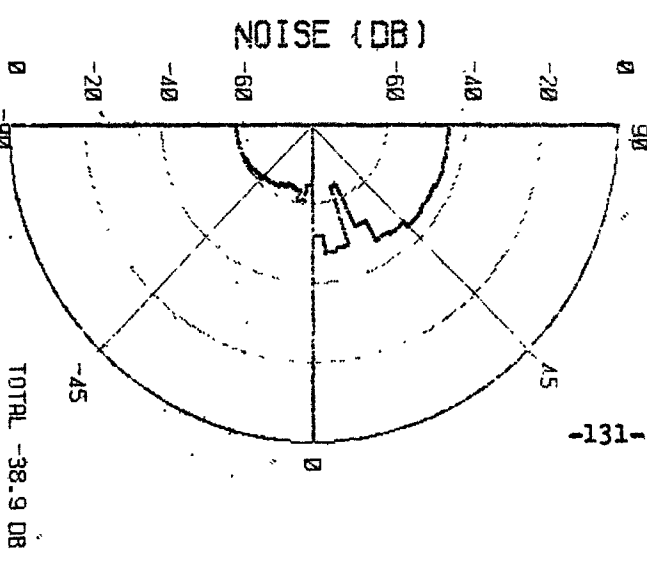
RANGE (KUS)



ARRIVAL ANGLE



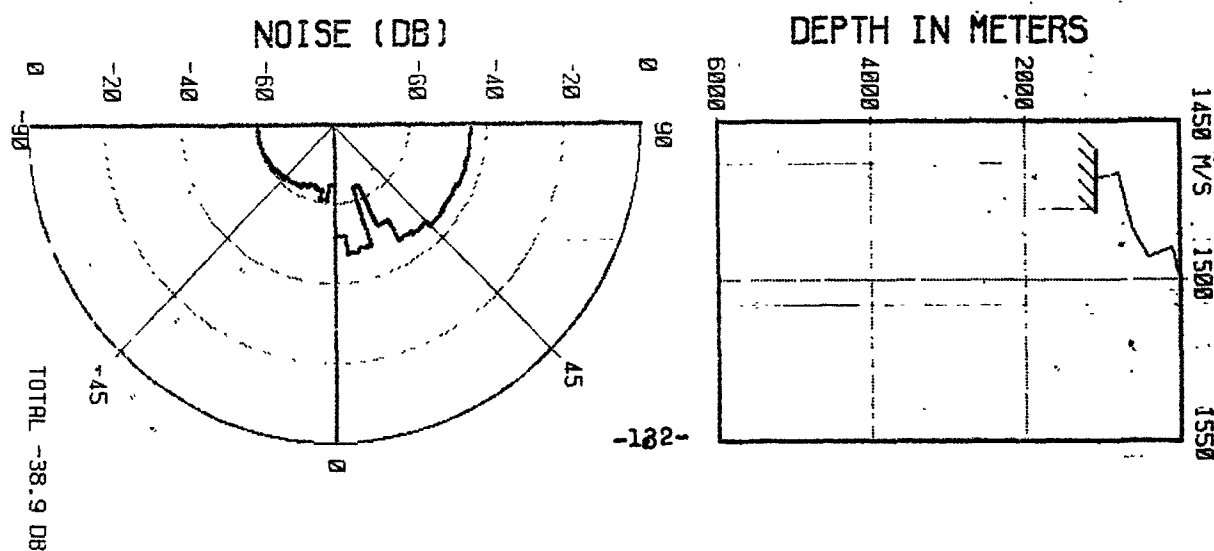
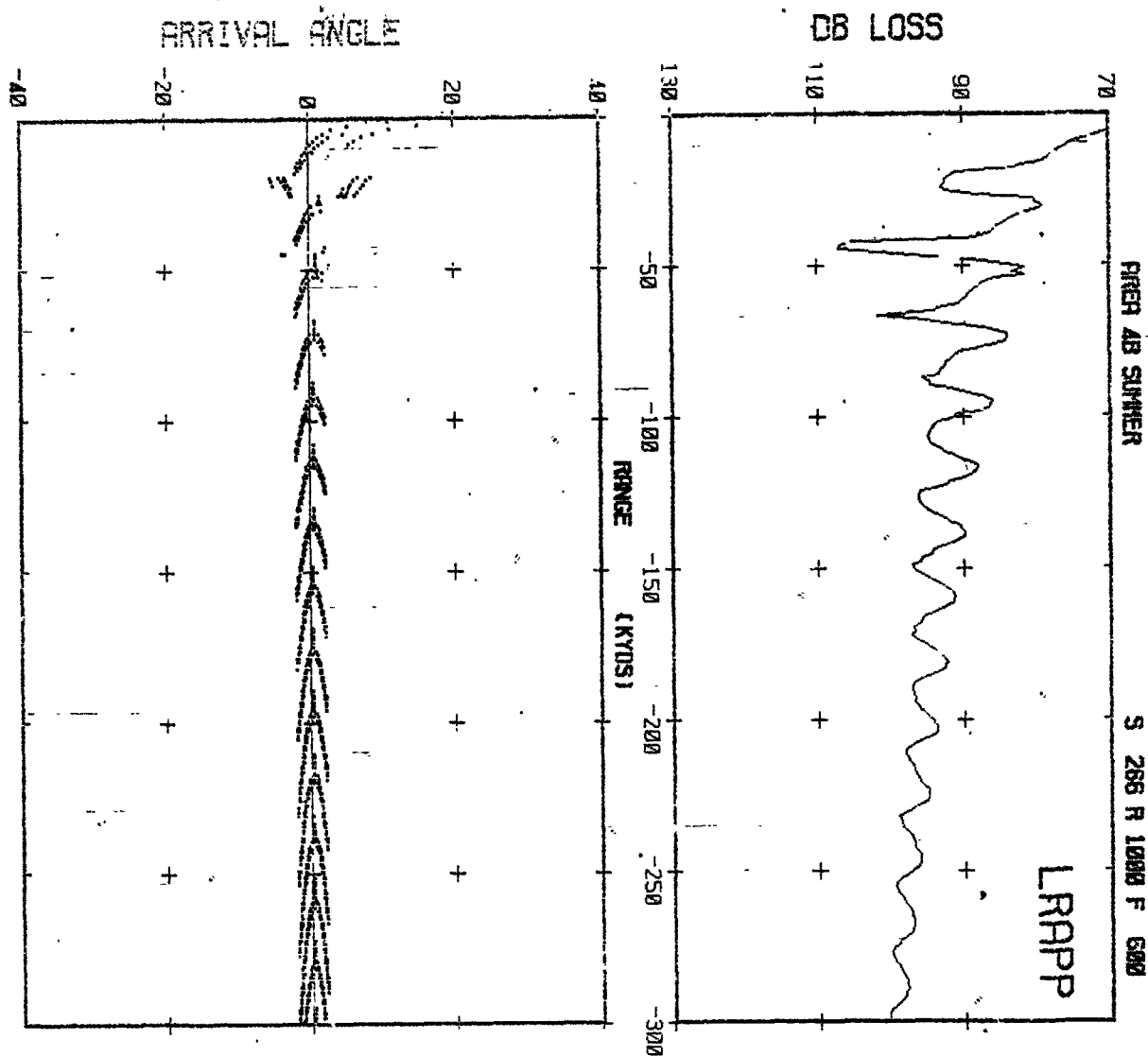
DEPTH IN METERS



NOISE (DB)

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TOTAL -38.9 DB



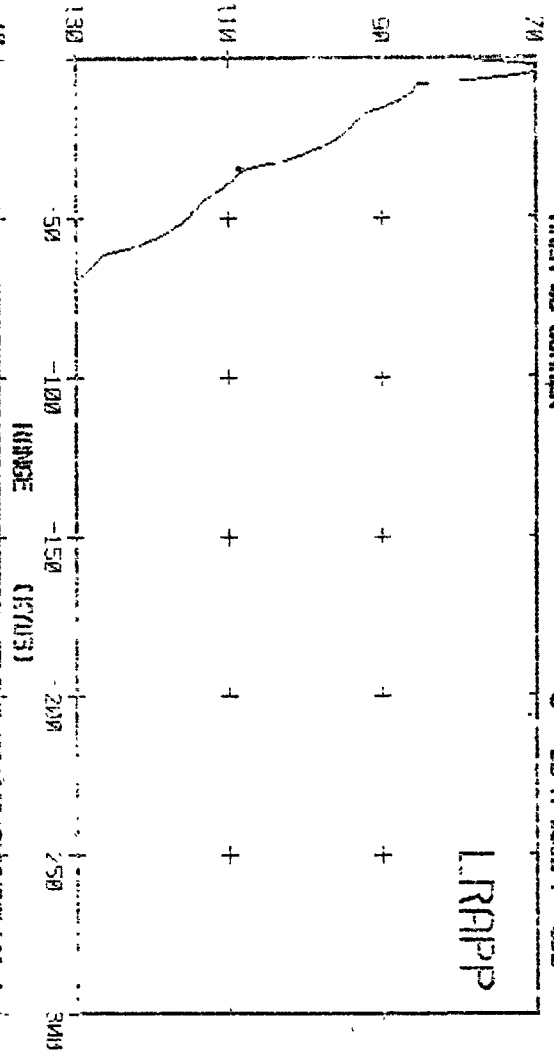
PRER AB SUMMER

S 20 R 1312 F 683

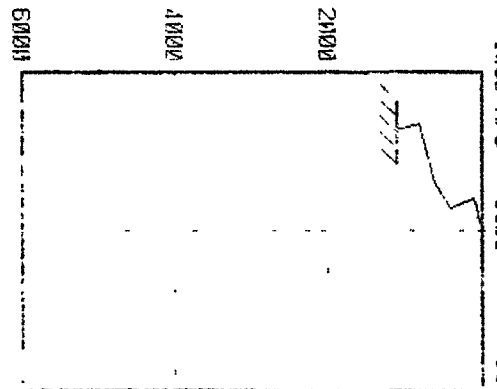
1450 M/S 1500 1510

05 1088

LRAPP

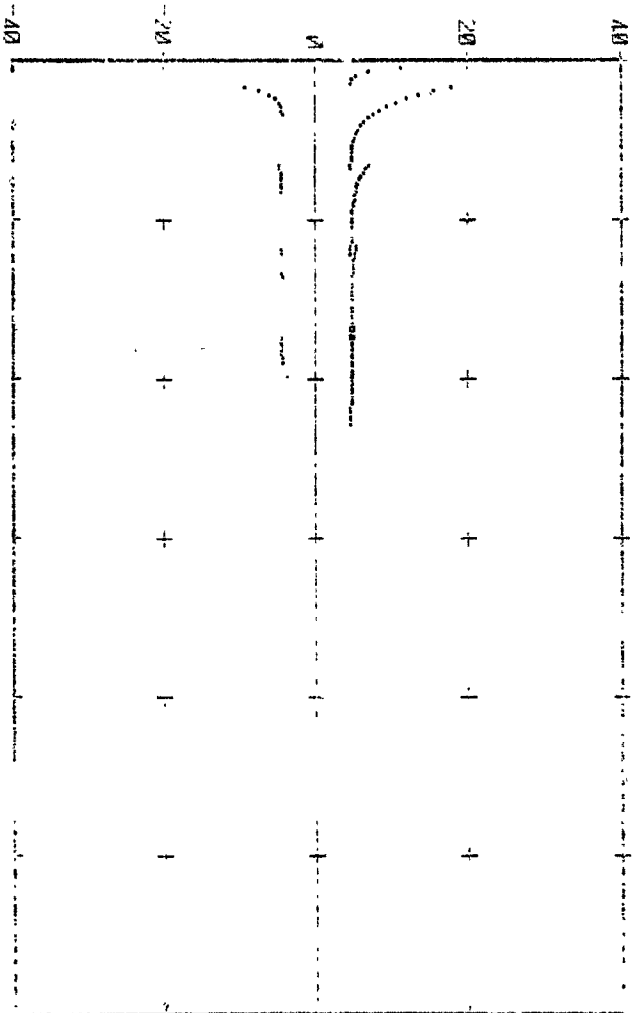


DEPTH IN METERS

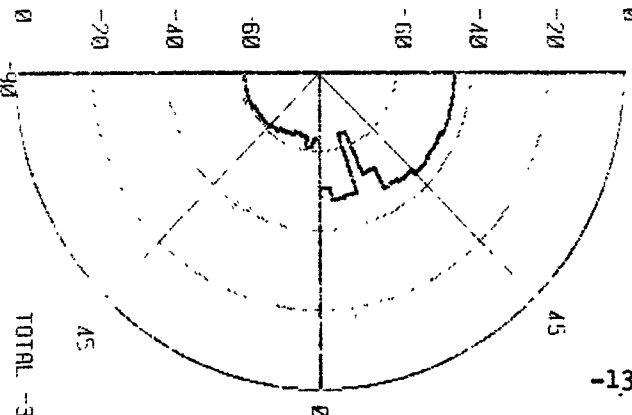


-133-

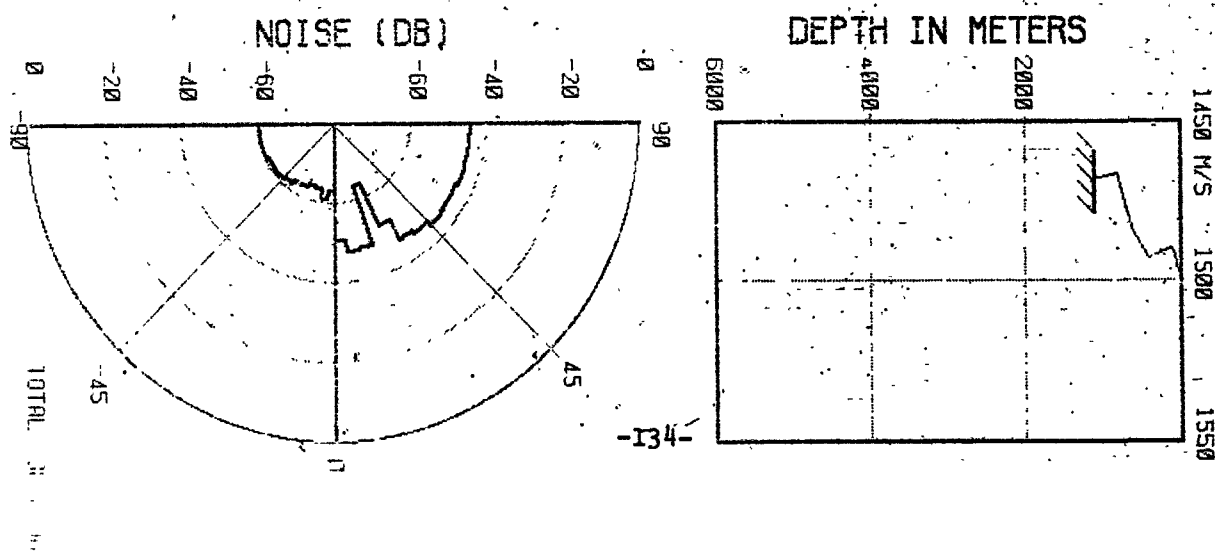
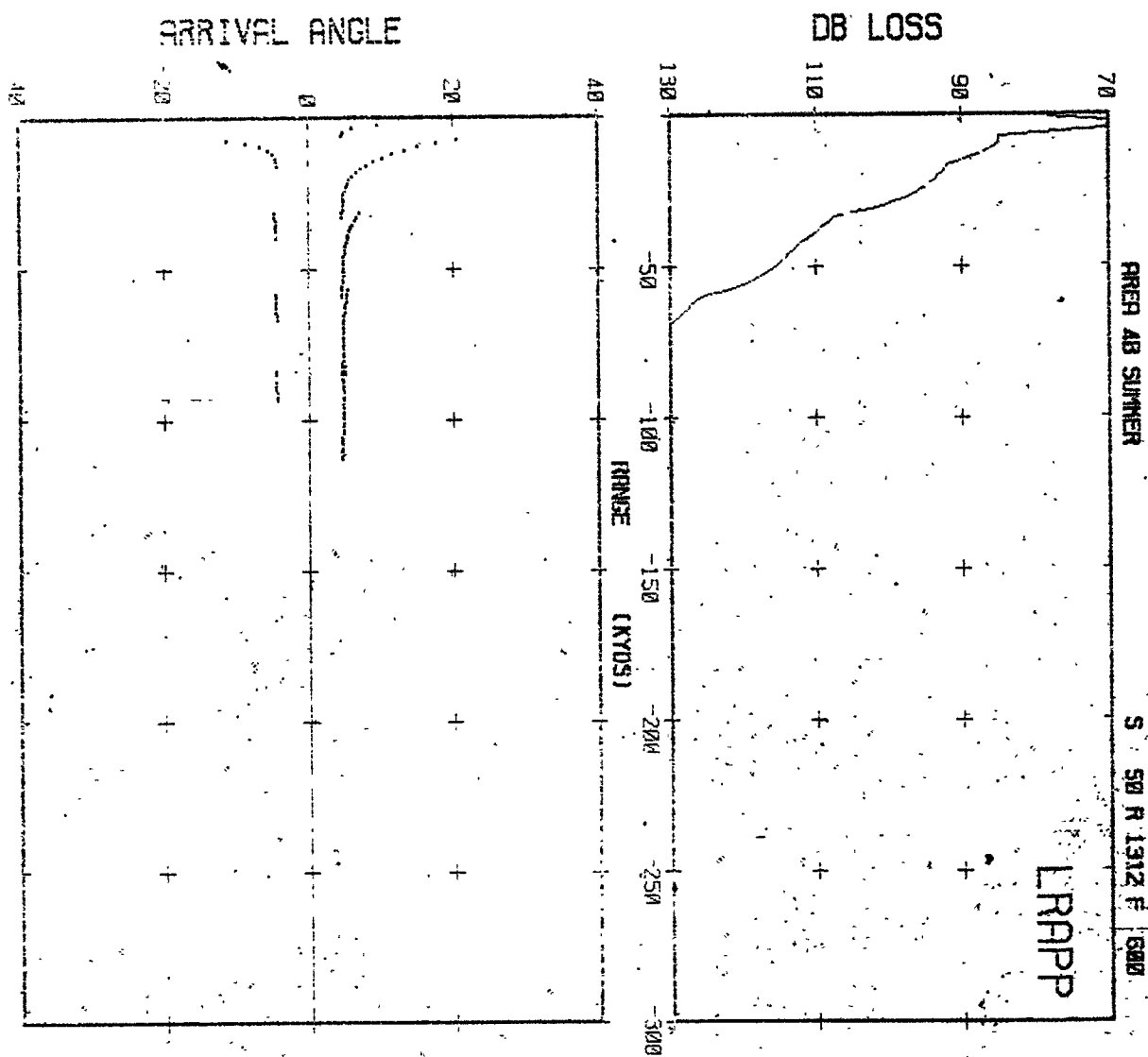
ARRIVAL ANGLE



NOISE (DB)



TOTAL -38.6174

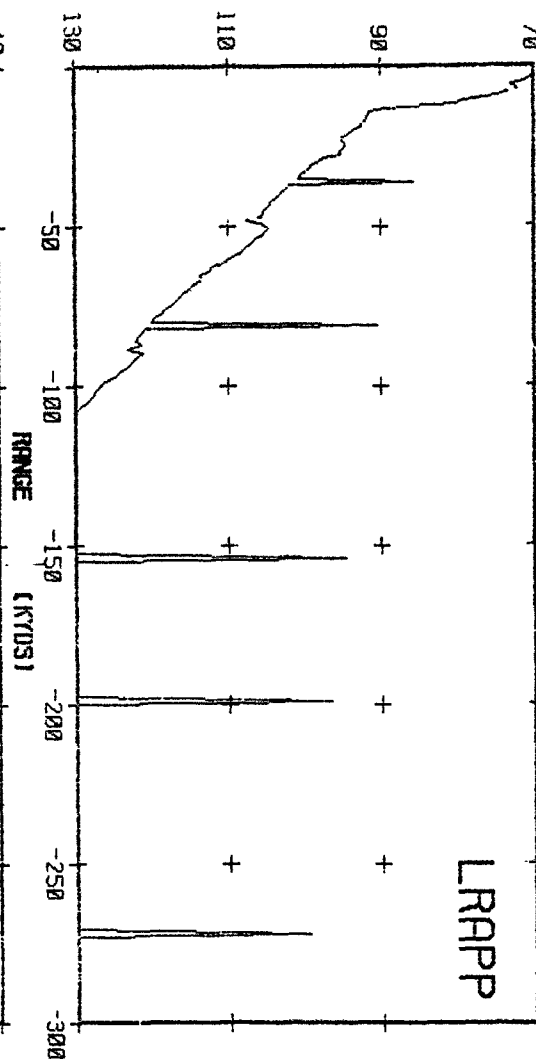


AREA 4B SUMMER

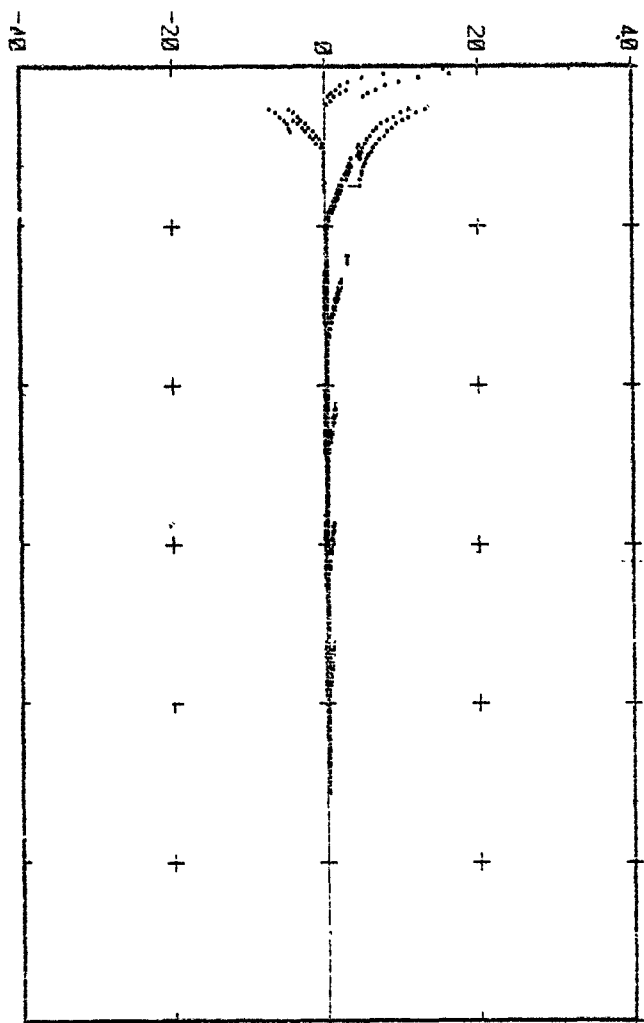
S 268 R 1312 F 600

1450 M/S 1500 1550

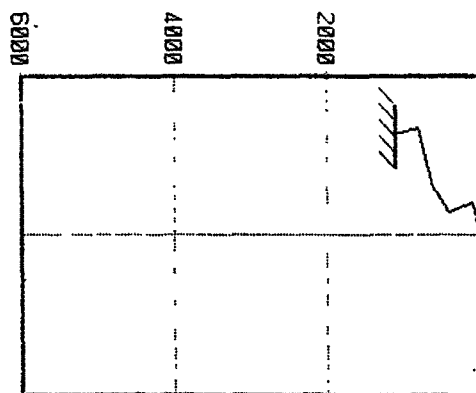
DB LOSS



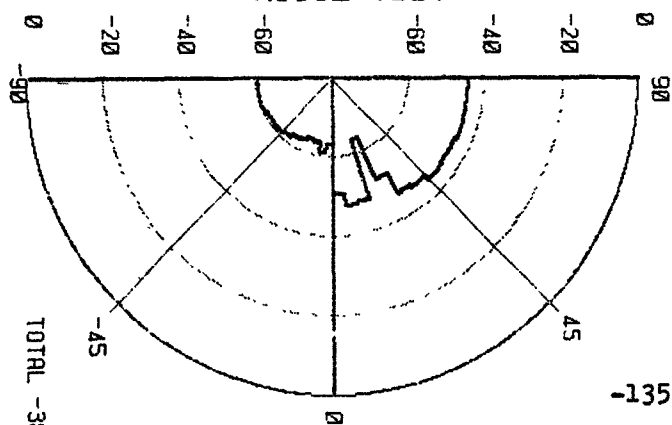
ARRIVAL ANGLE



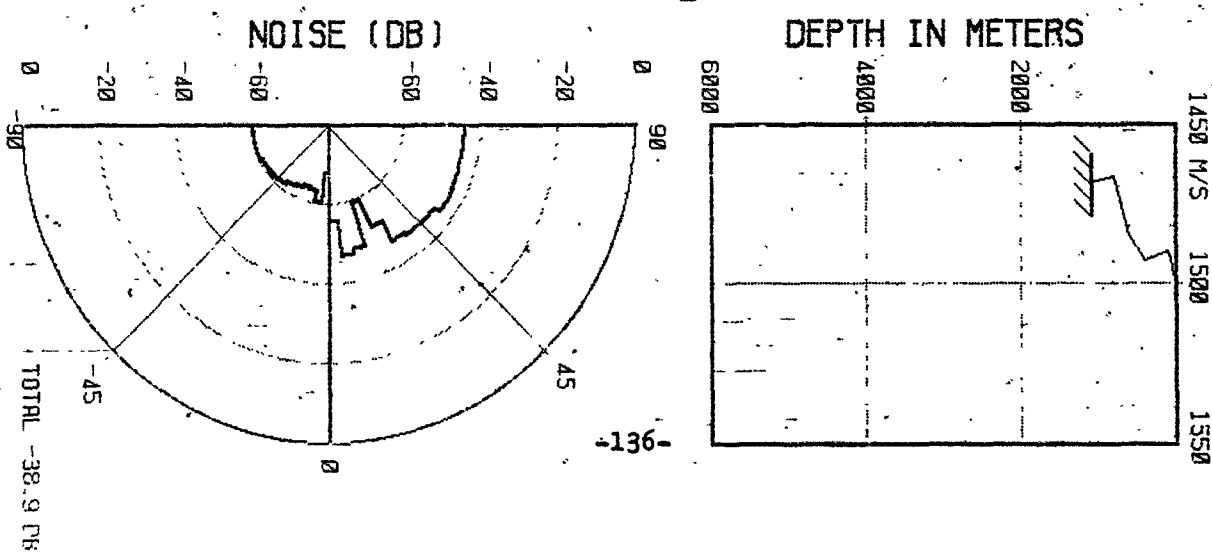
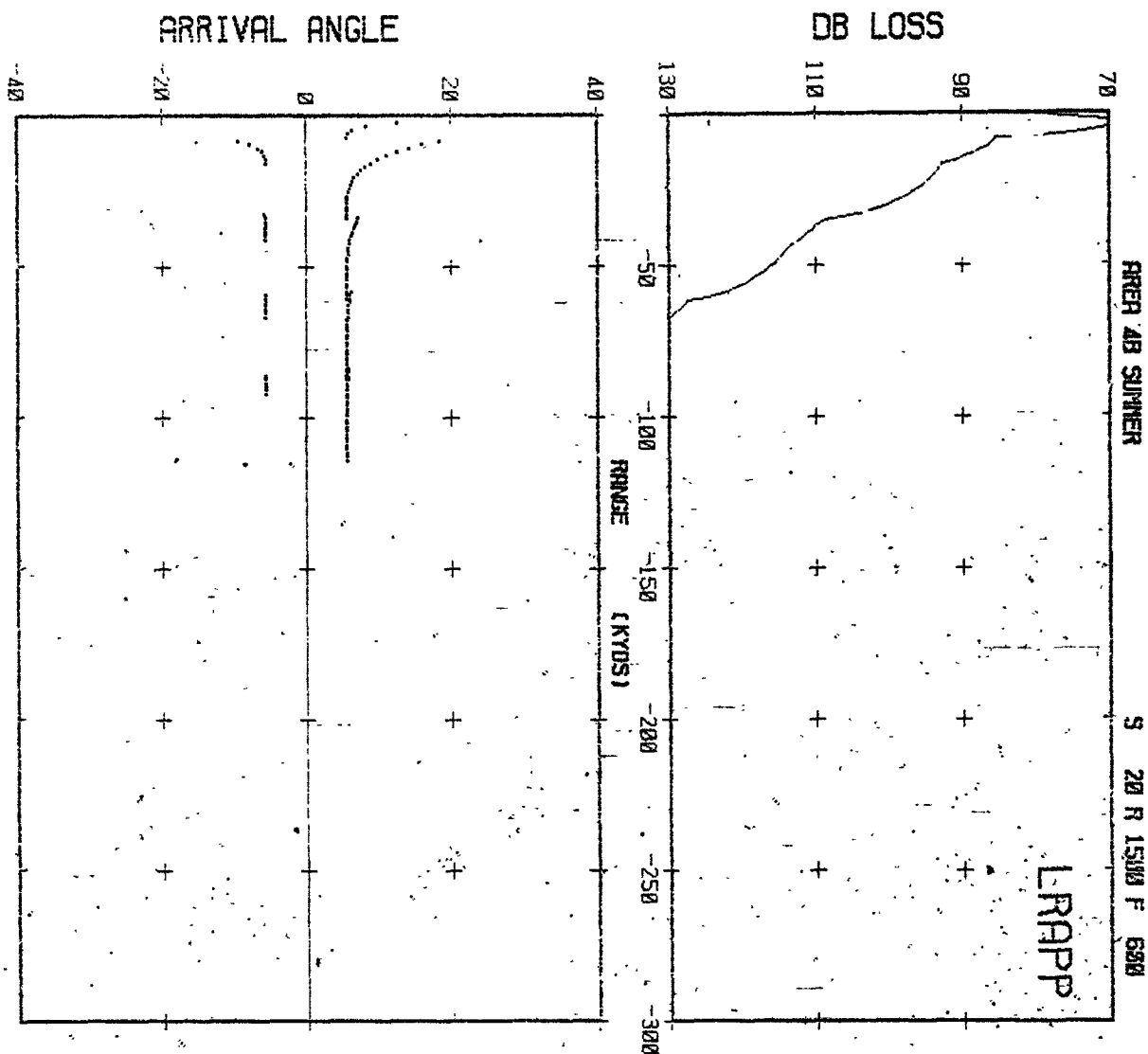
DEPTH IN METERS



NOISE (DB)



TOTAL -38.8 DB

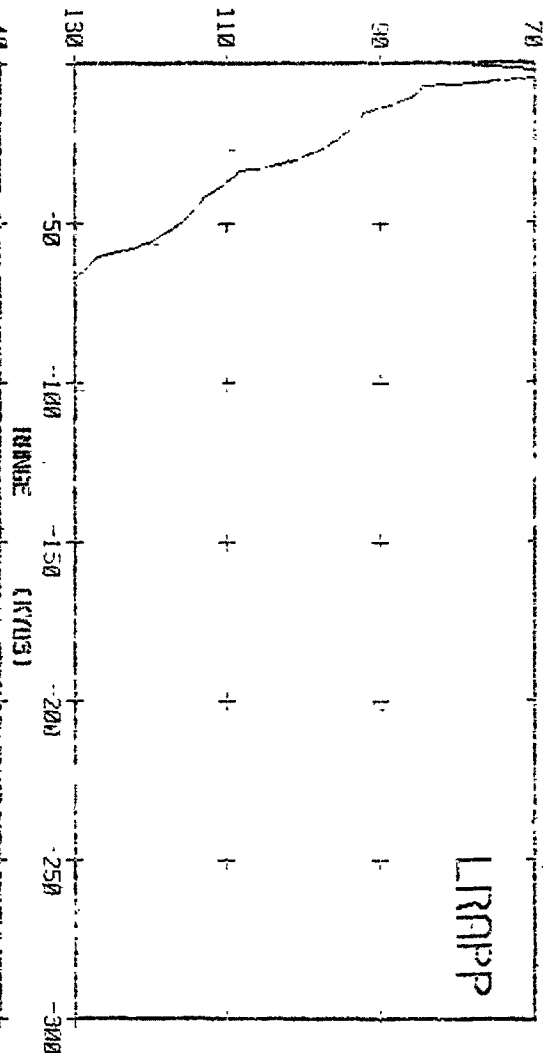


FINER AB SUMMER

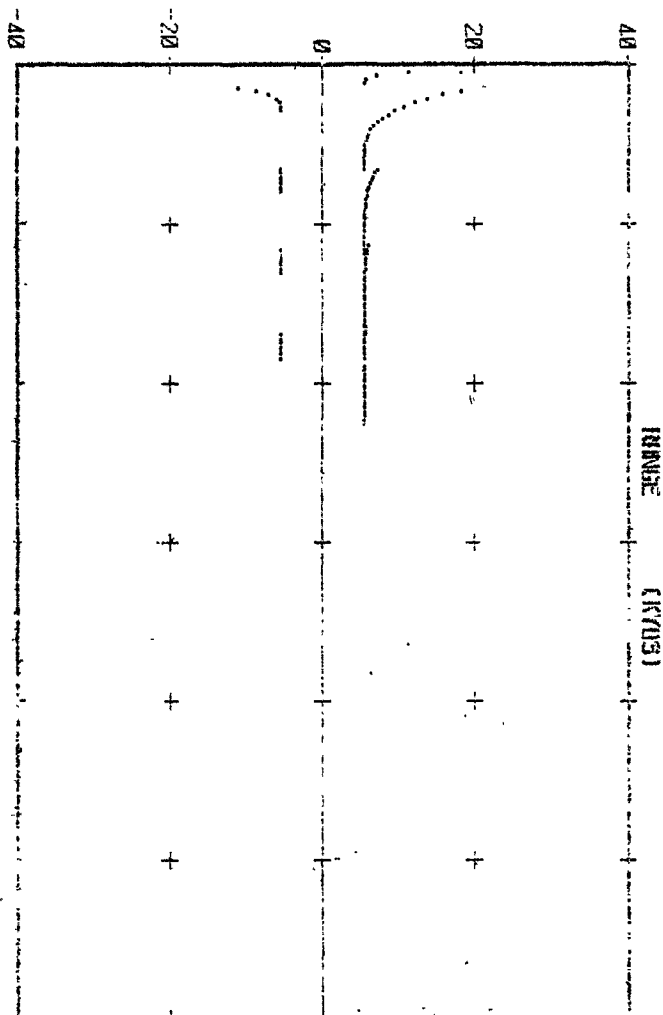
S 50 R 1500 F 600

1450 M/S 1500 1550

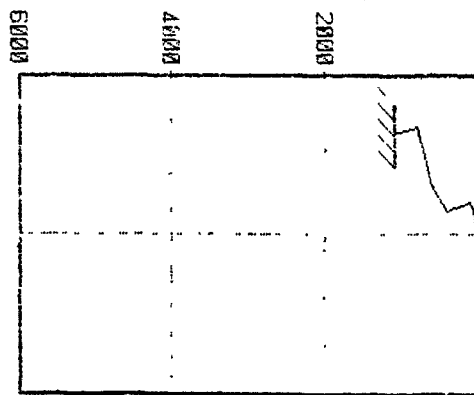
DB LOSS



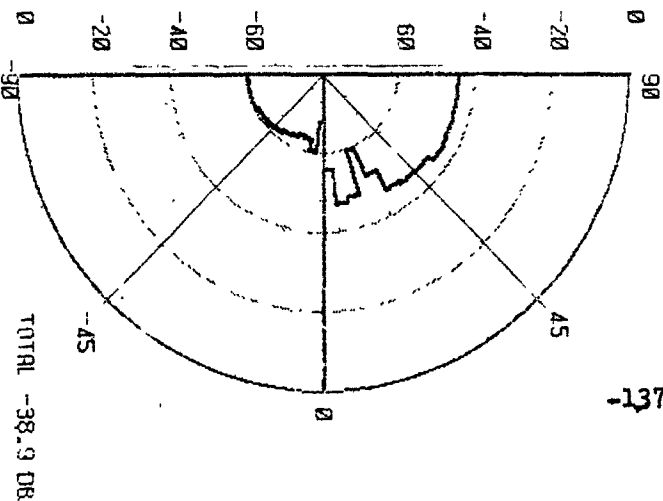
ARRIVAL ANGLE



DEPTH IN METERS

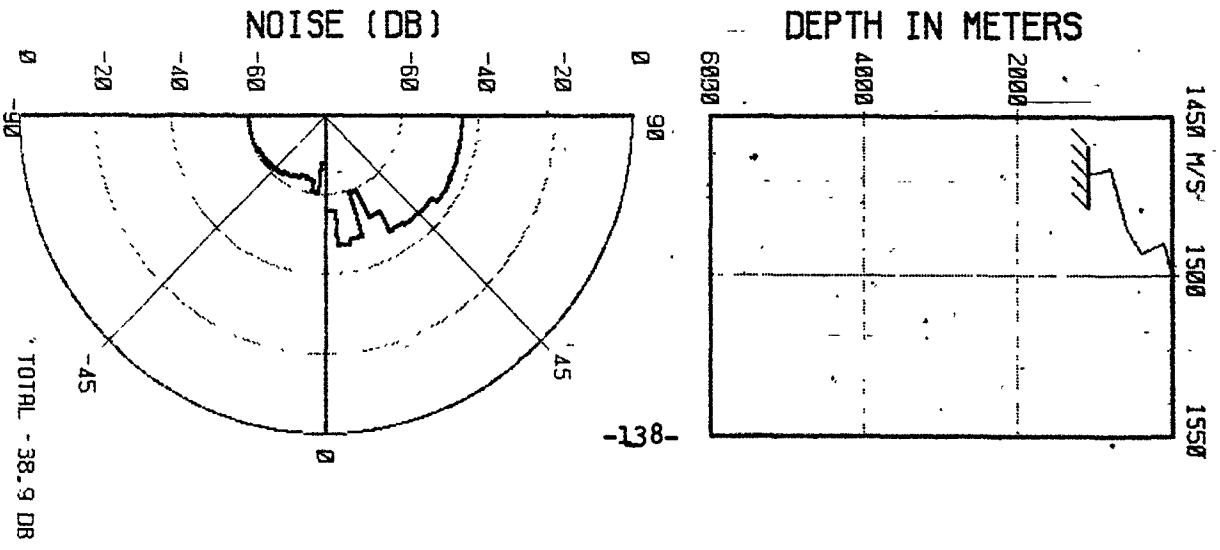
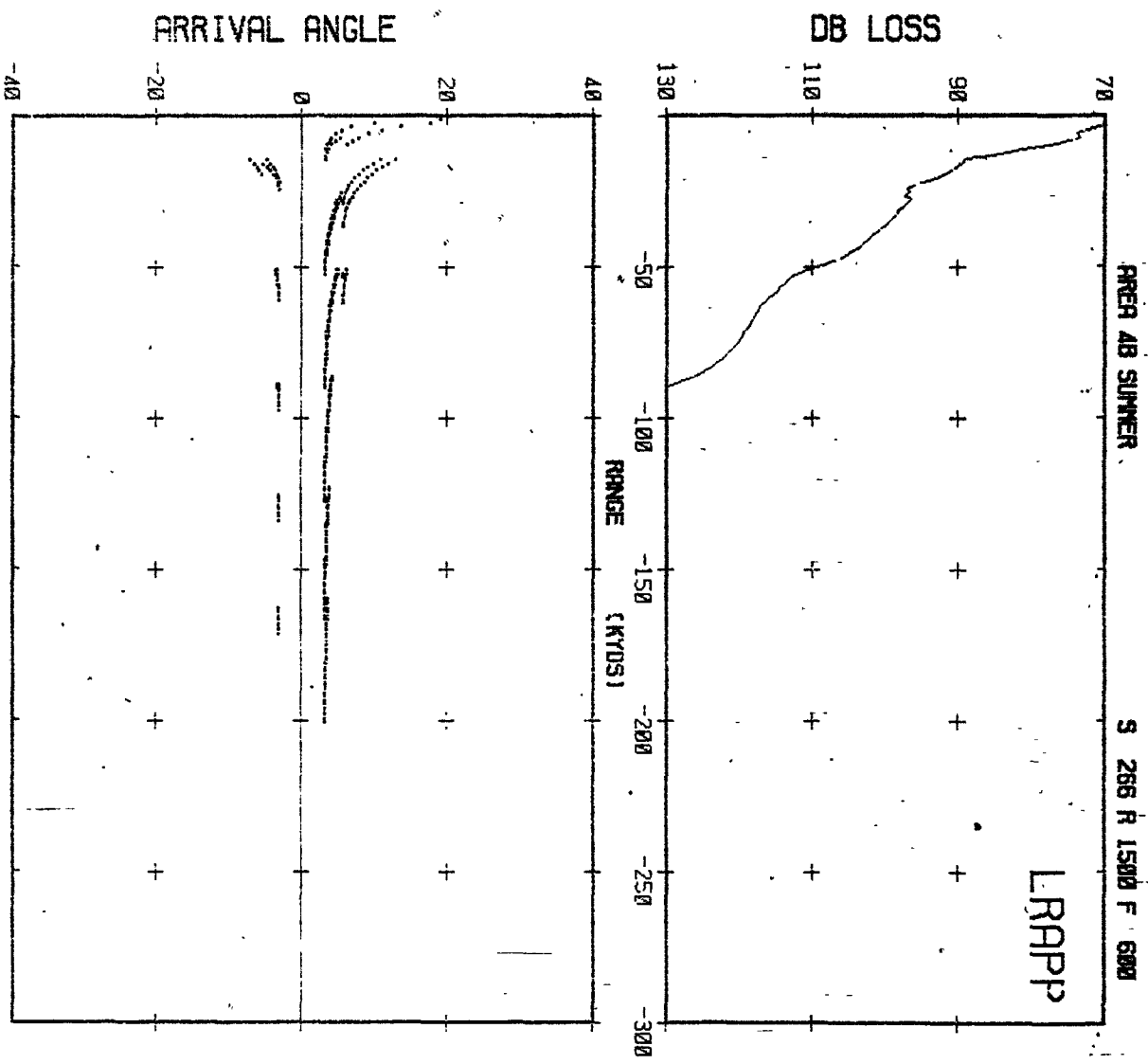
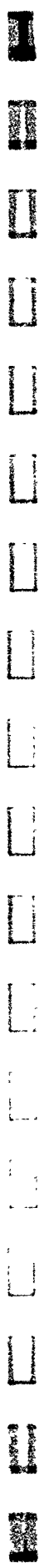


NOISE (DB)



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TOTAL -38.9 DB

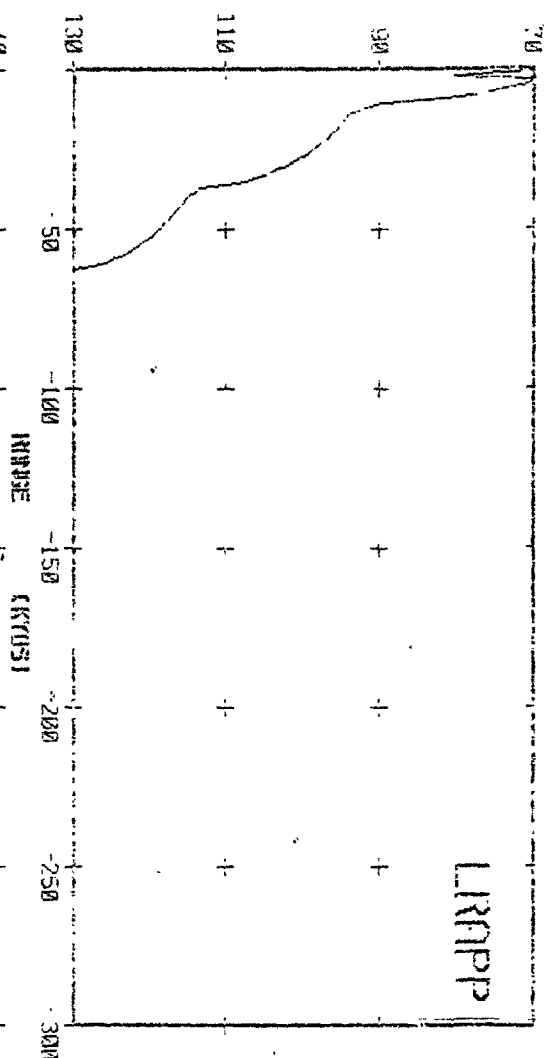


FIRE 4B SUMMER

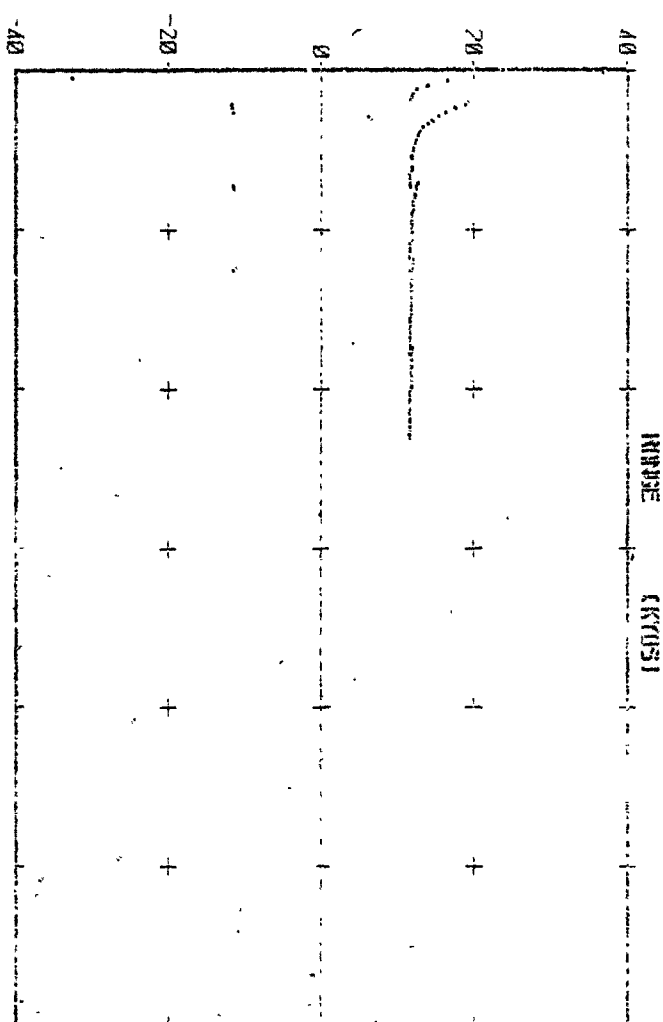
S 20 R 2525 F 600

1450 M.S 1500 1550

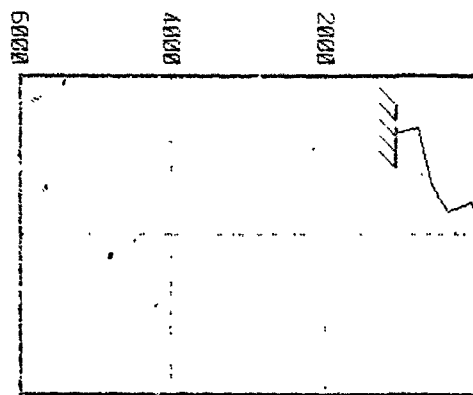
DB LOSS



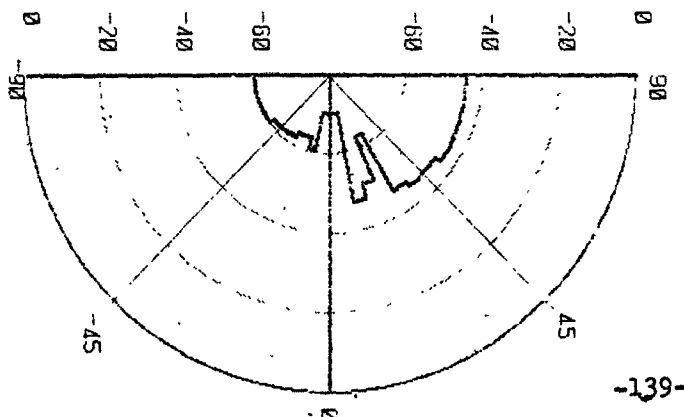
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

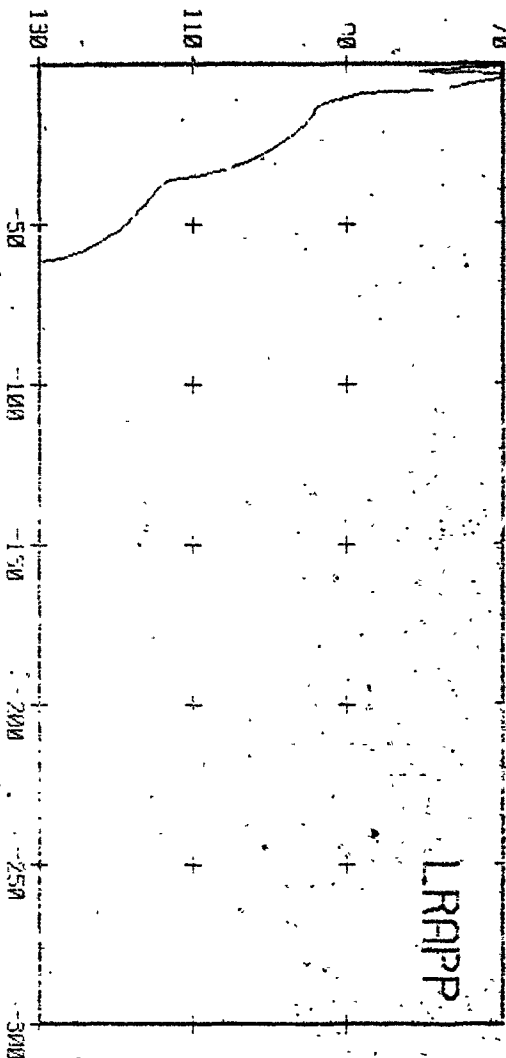


AREA AB SUNKER

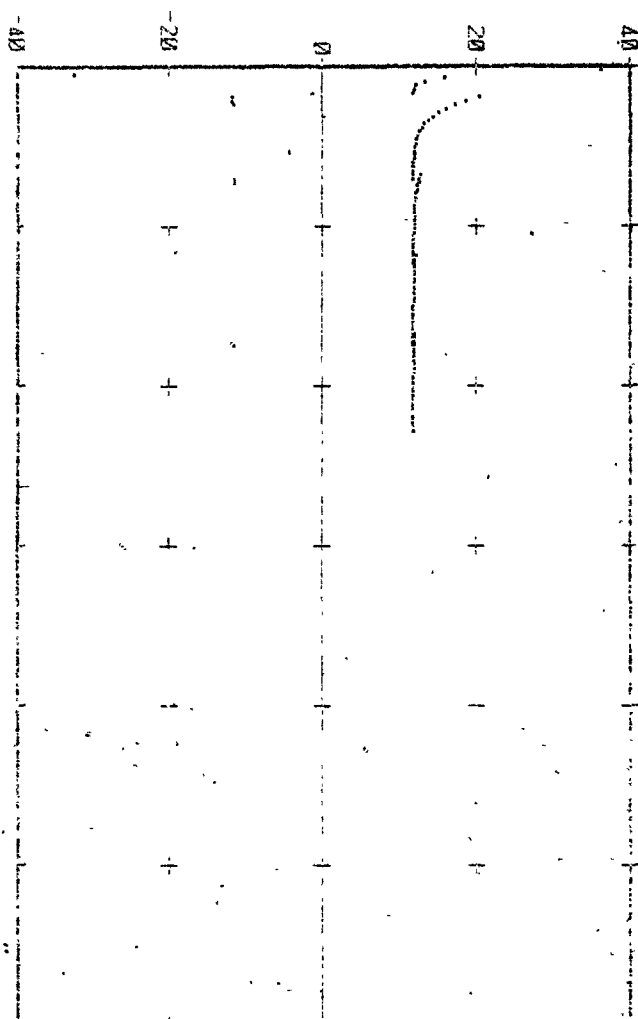
S 50 R 2625 600

1450 M/S 1500 1550

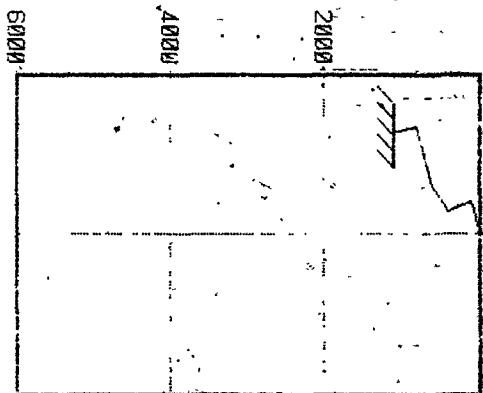
DB LOSS



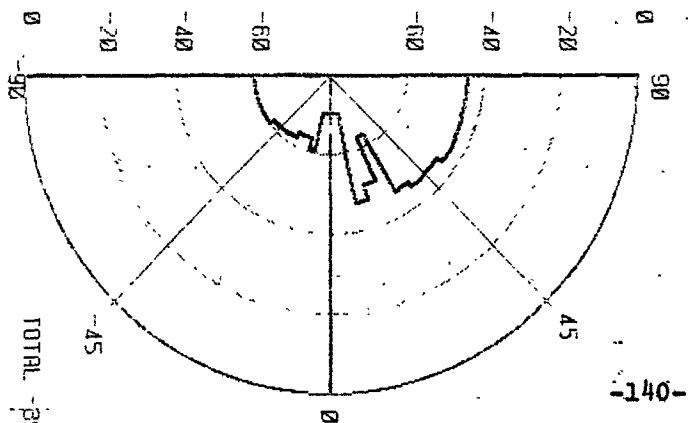
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



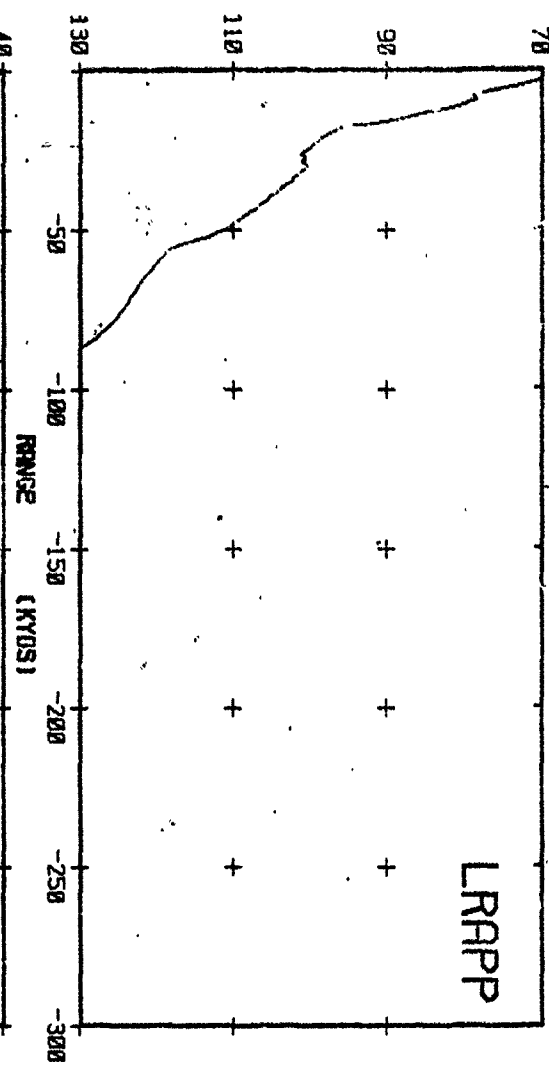
TOTAL -89.2 DB

AREA AB SUMMER

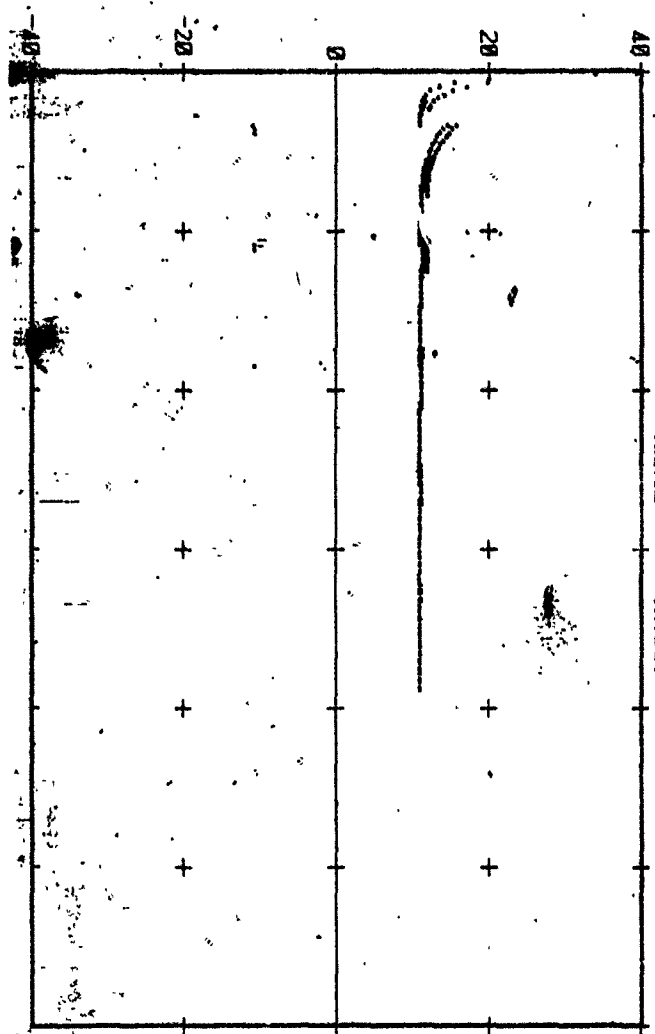
S 268 R 2625 F 600

1450 M/S 1500 1550

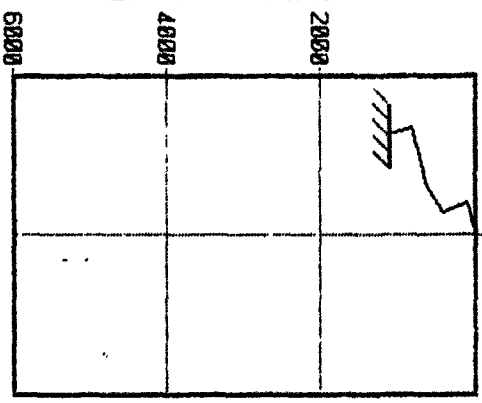
DB LOSS



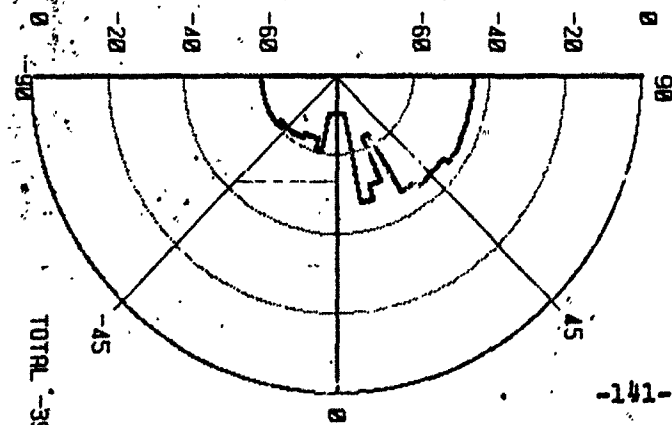
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



FINCH AB SUMMER

S 50 R 5509 F 600

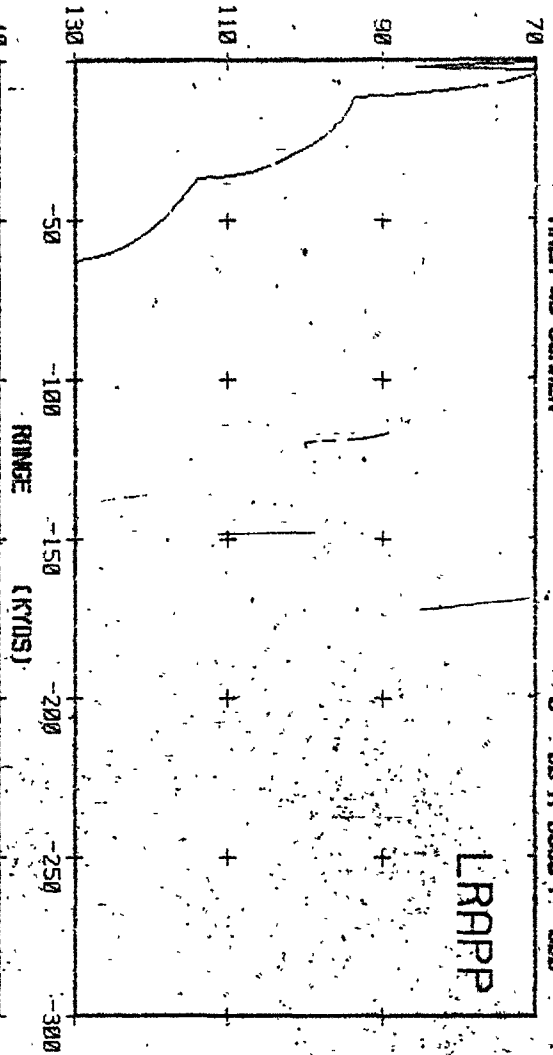
1450 M/S

1500

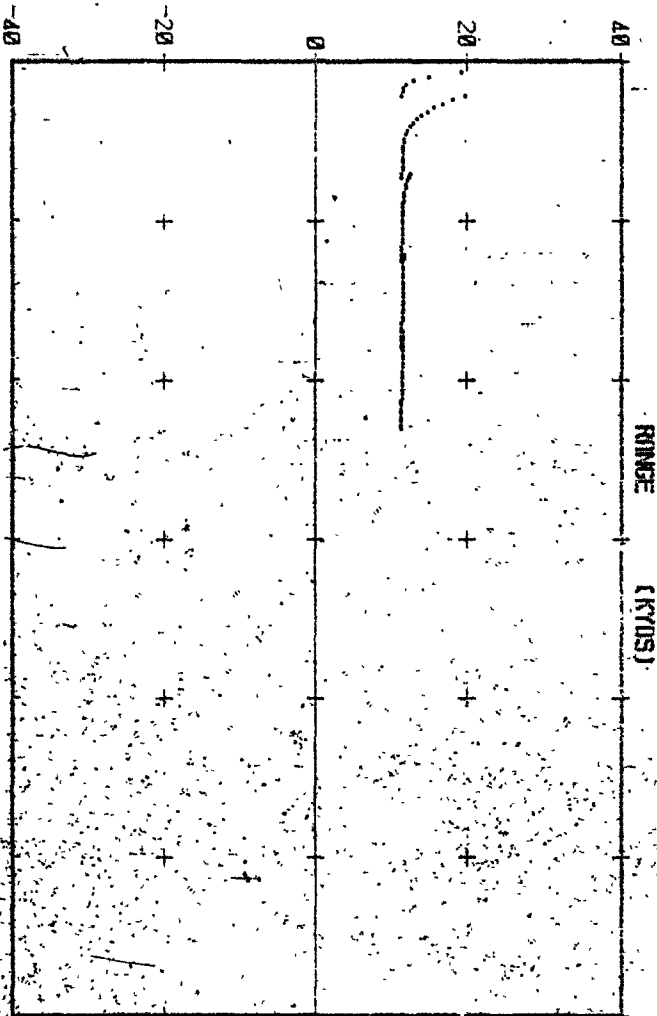
1550

LRAPP

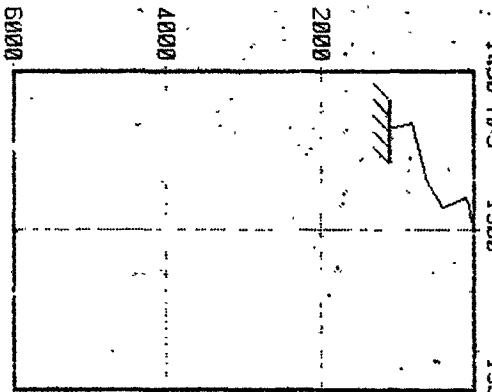
DB LOSS



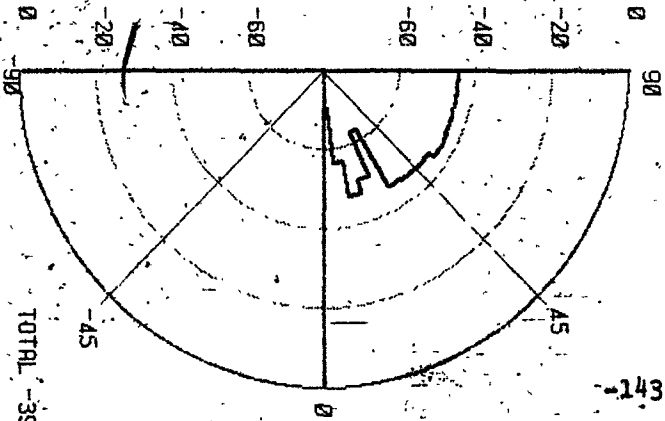
ARRIVAL ANGLE



DEPTH IN METERS

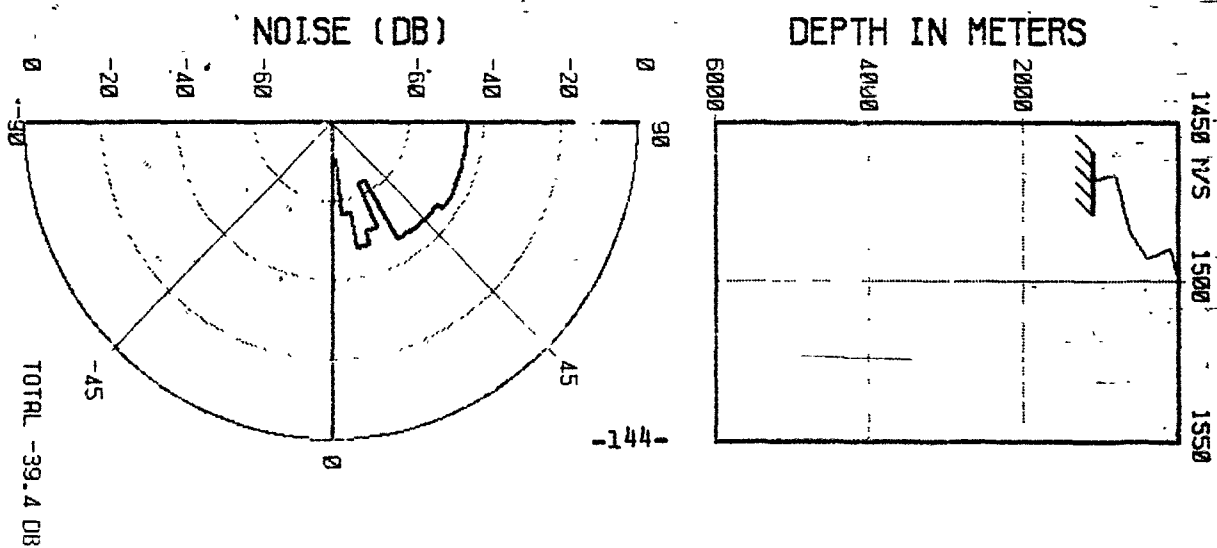
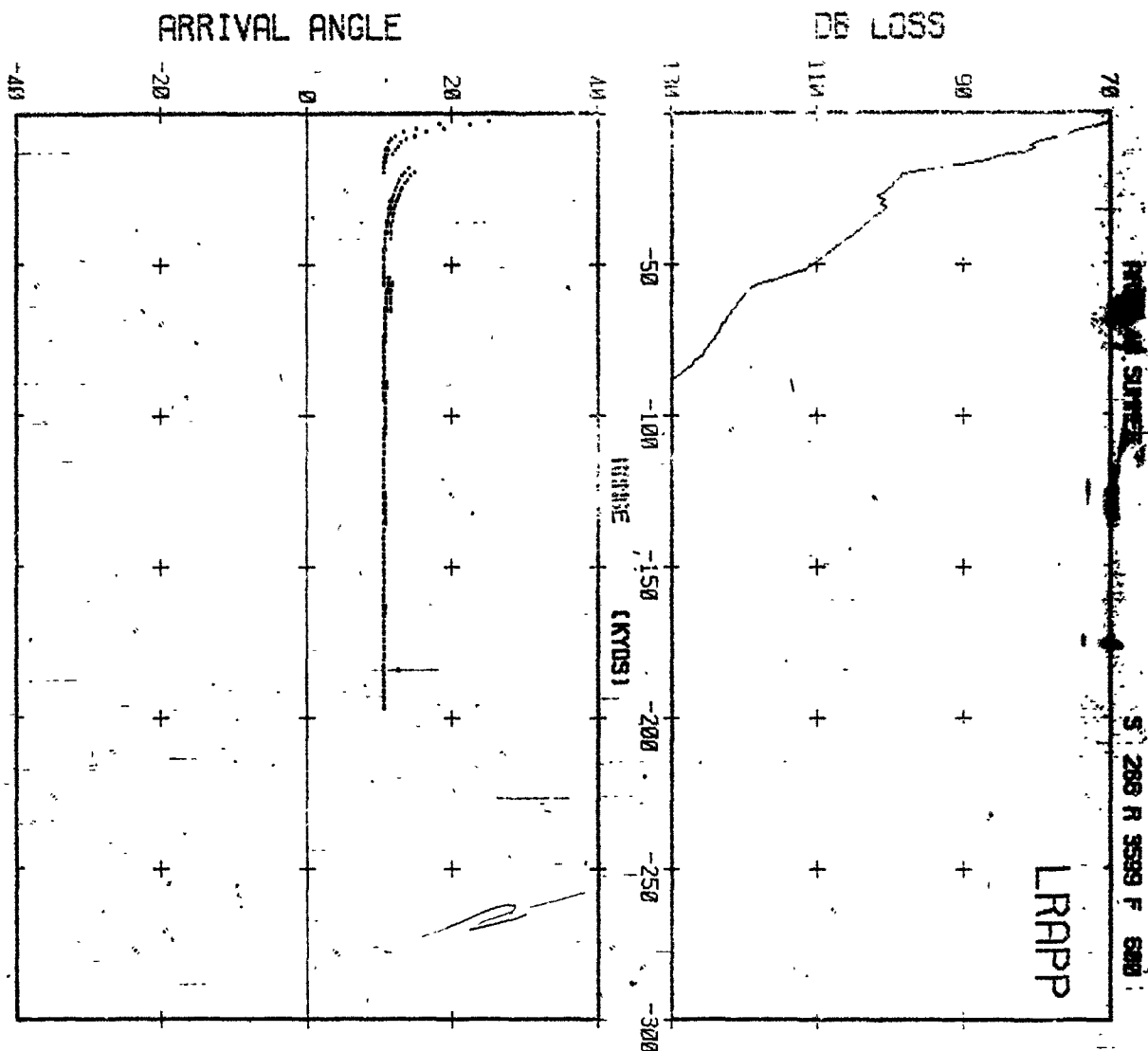


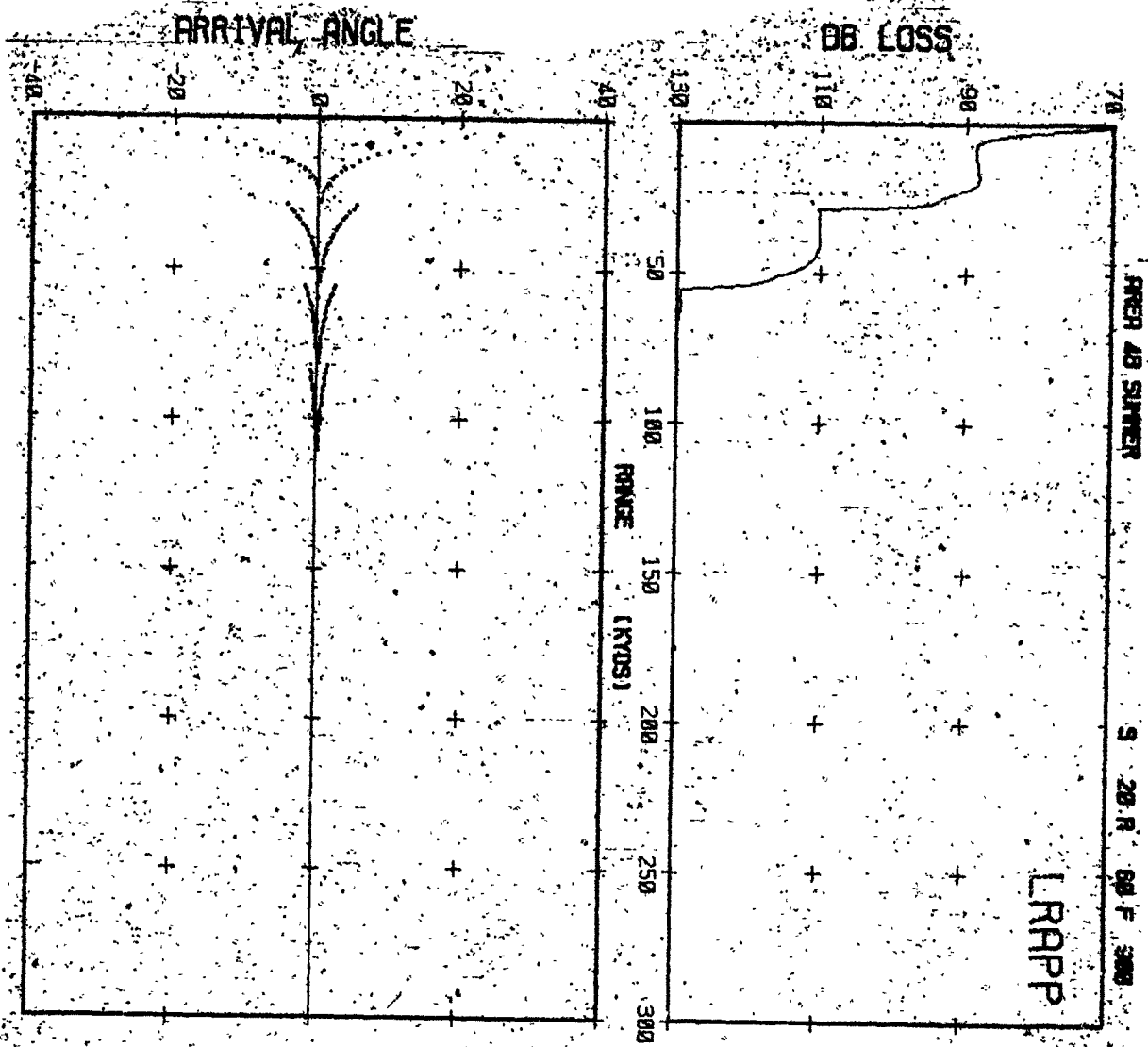
NOISE (DB)

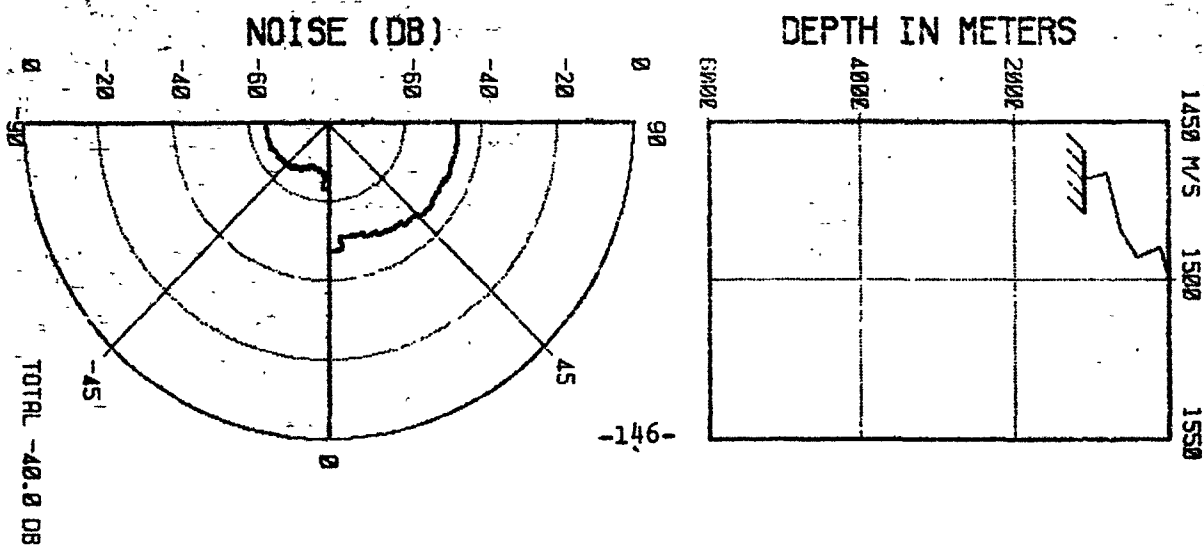
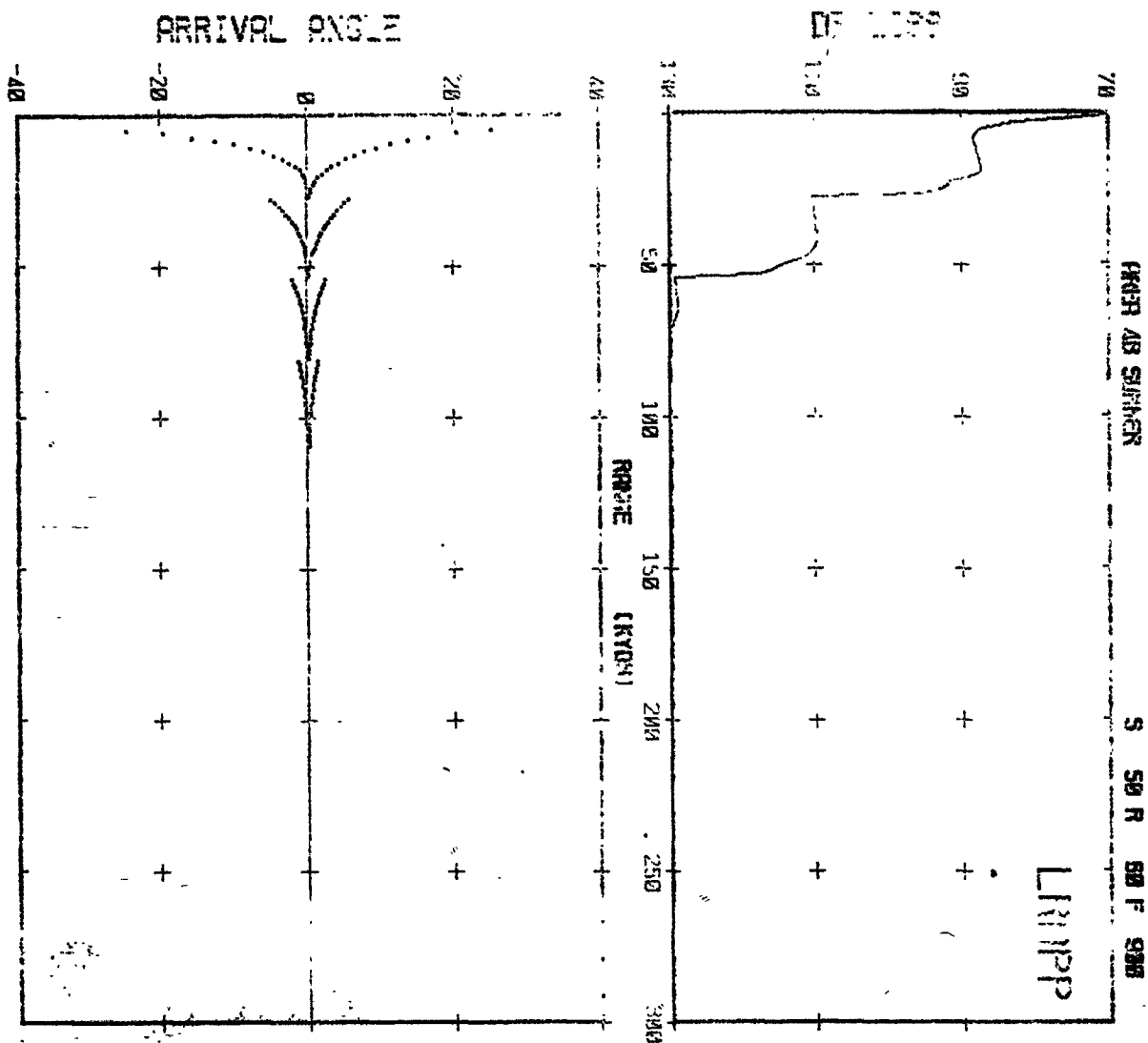


TOTAL -39.4 DB

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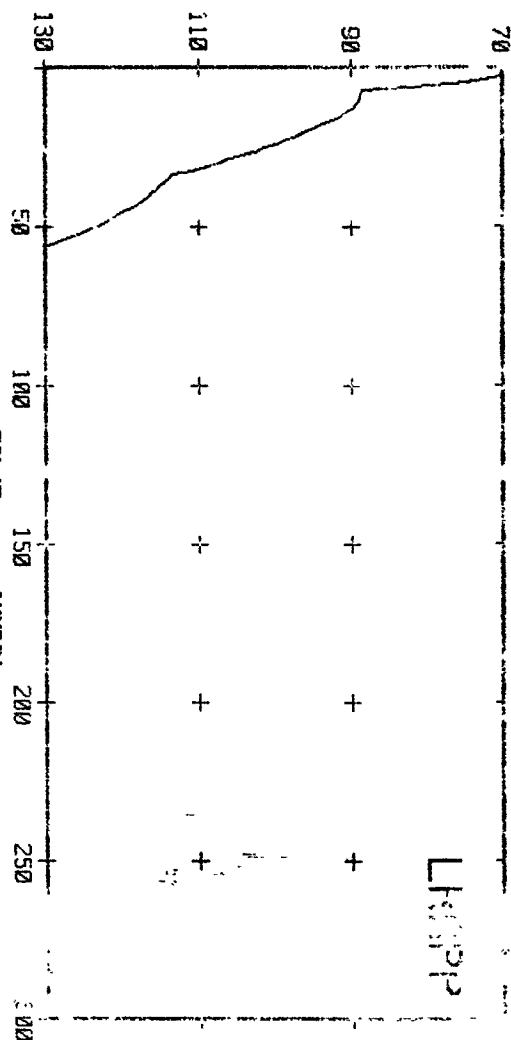


RINER AIR SURINER

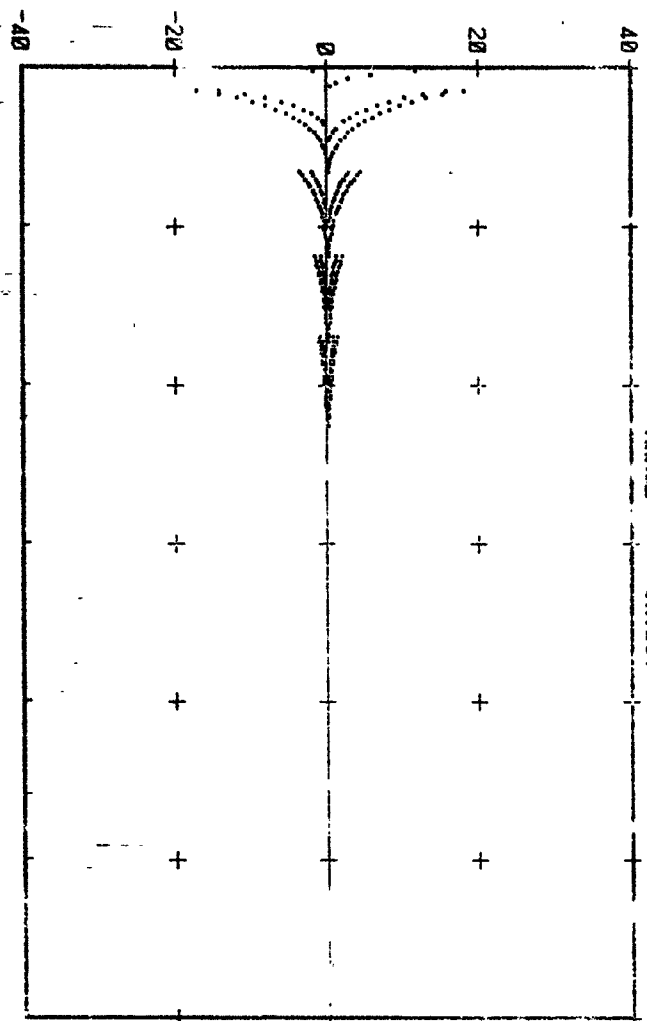
S 268 R 60 F 331

1450 M/S 1500 1550

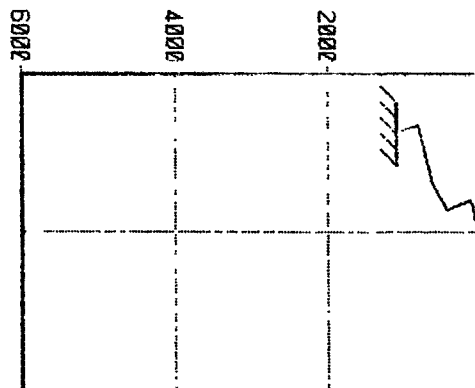
DB LOSS



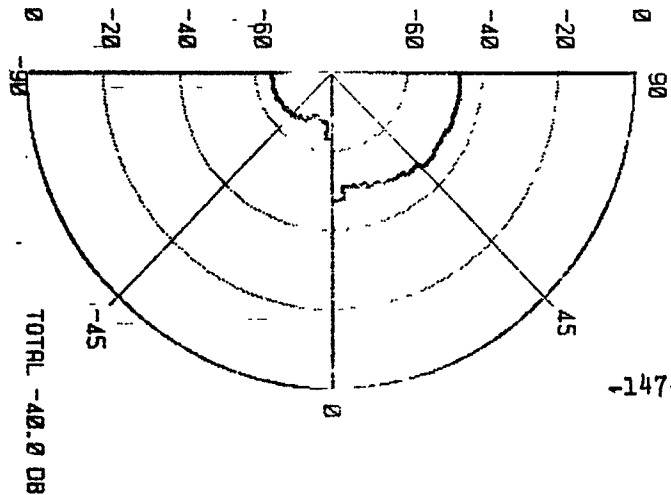
ARRIVAL ANGLE

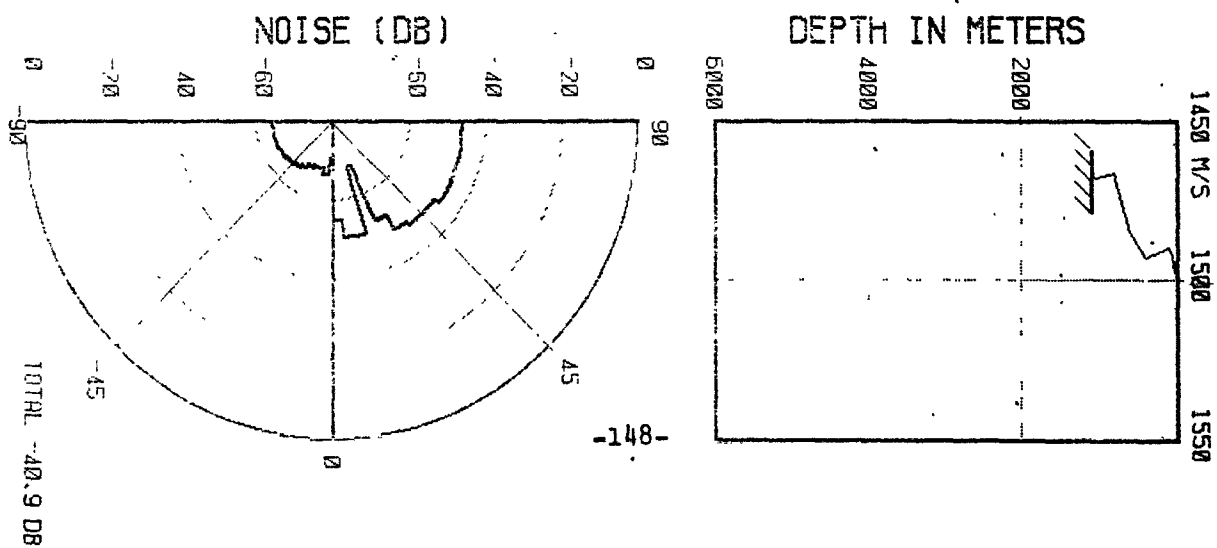
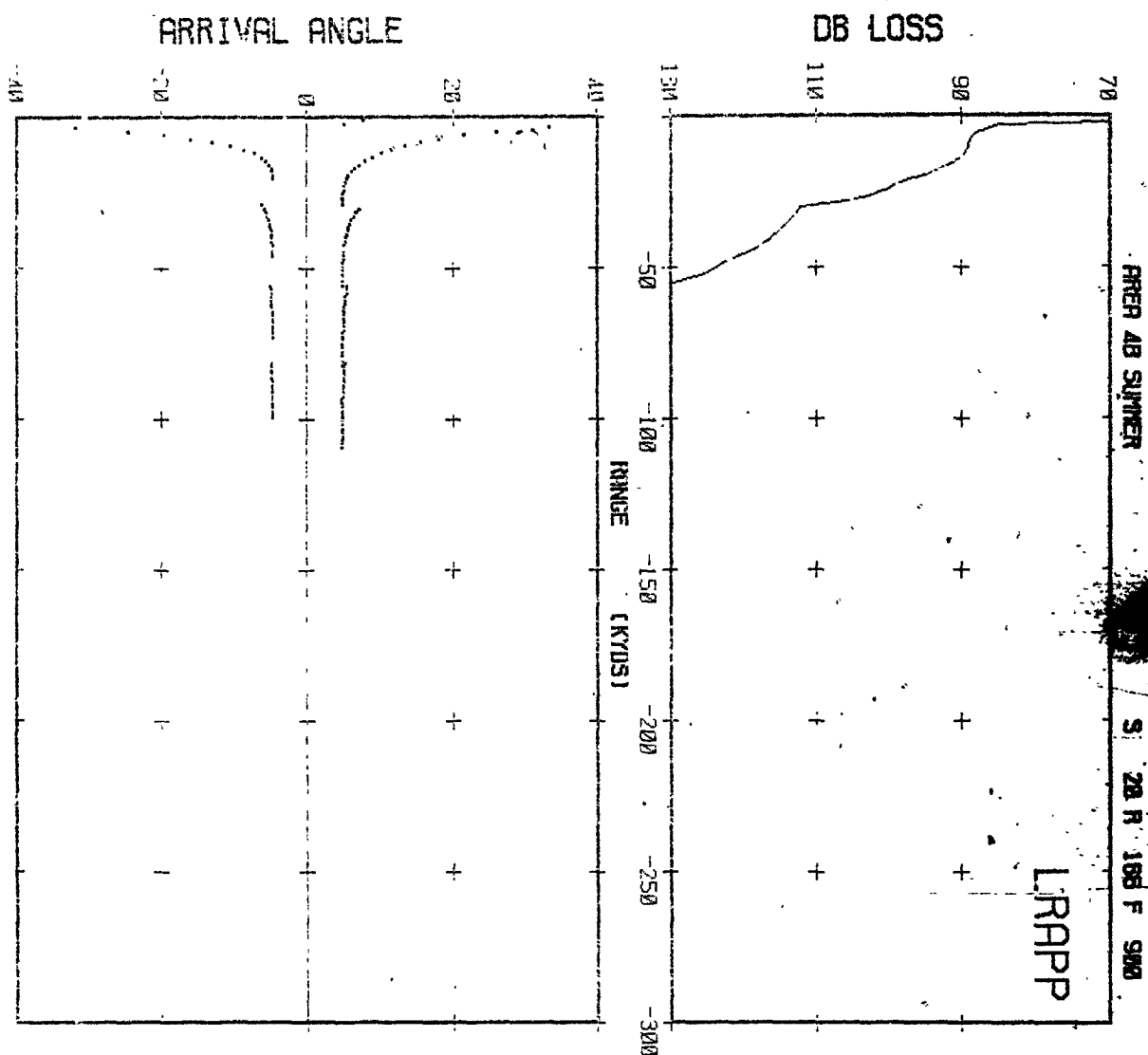


DEPTH IN METERS



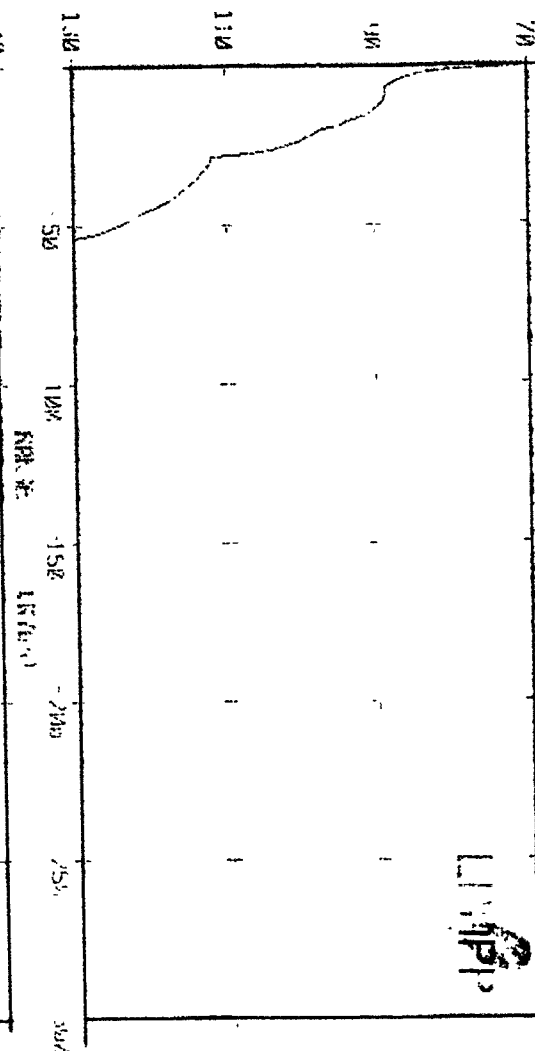
NOISE (DB)



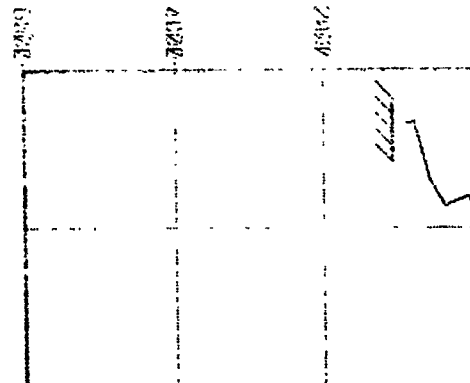


FRONT AIR SECTION

S 50 R 160 I 111

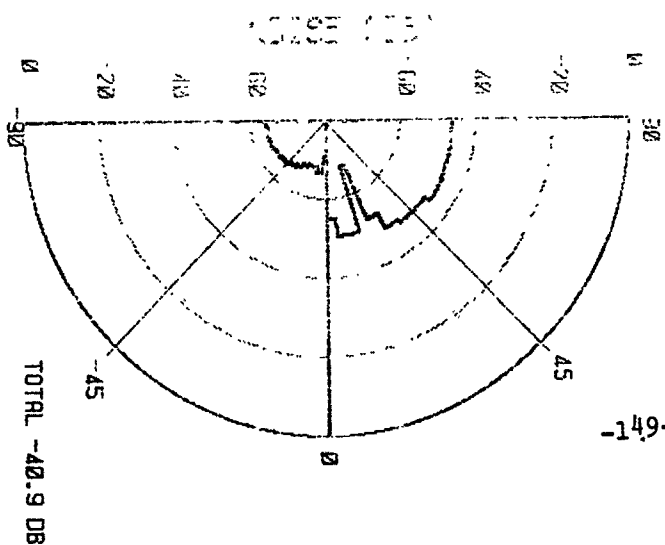
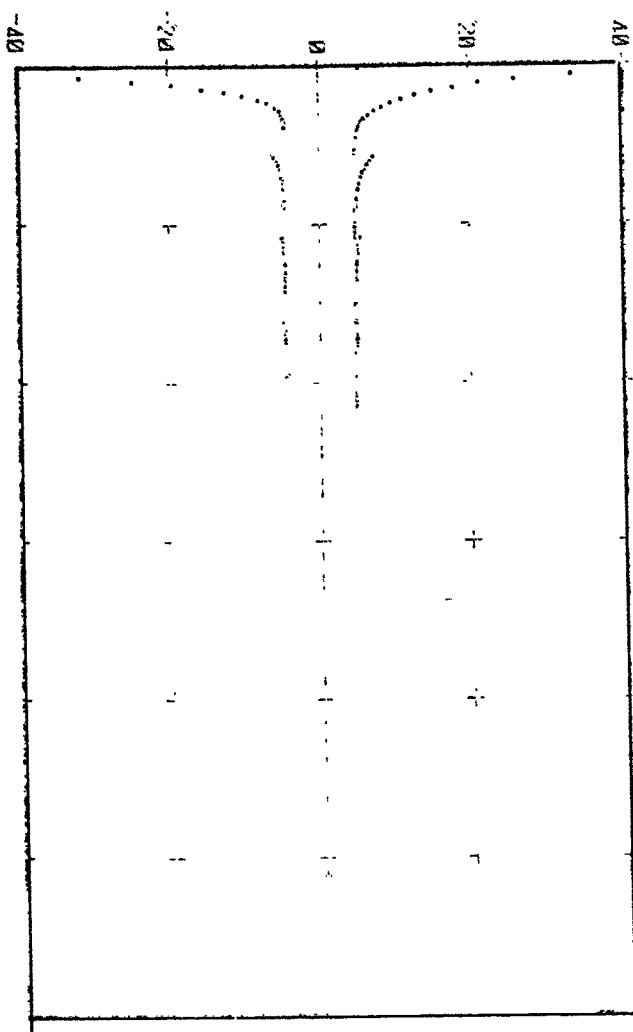


1450 M/S 1500 1550

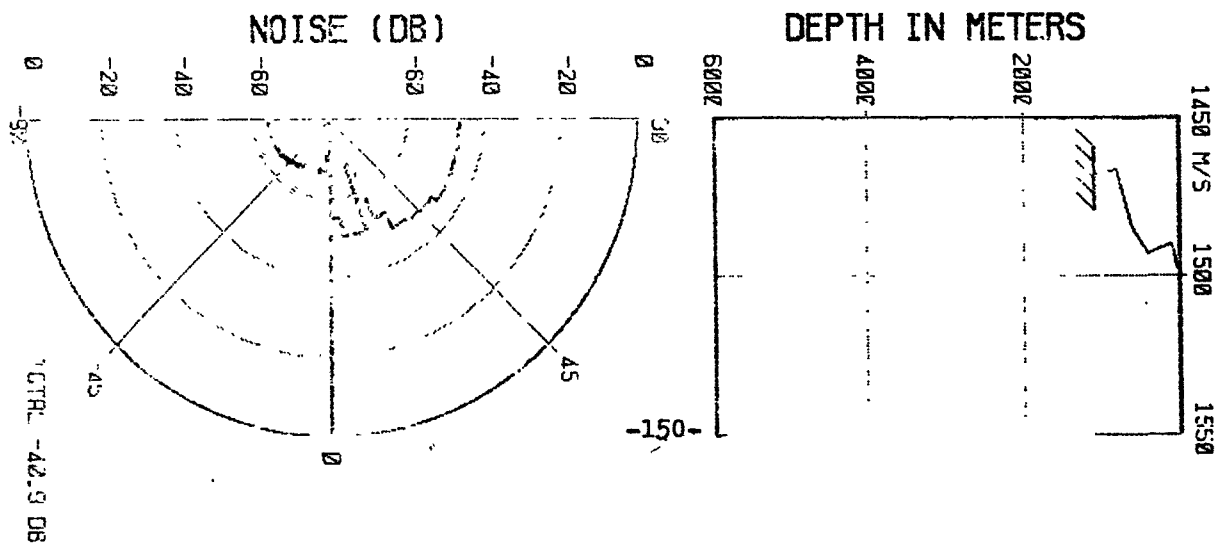
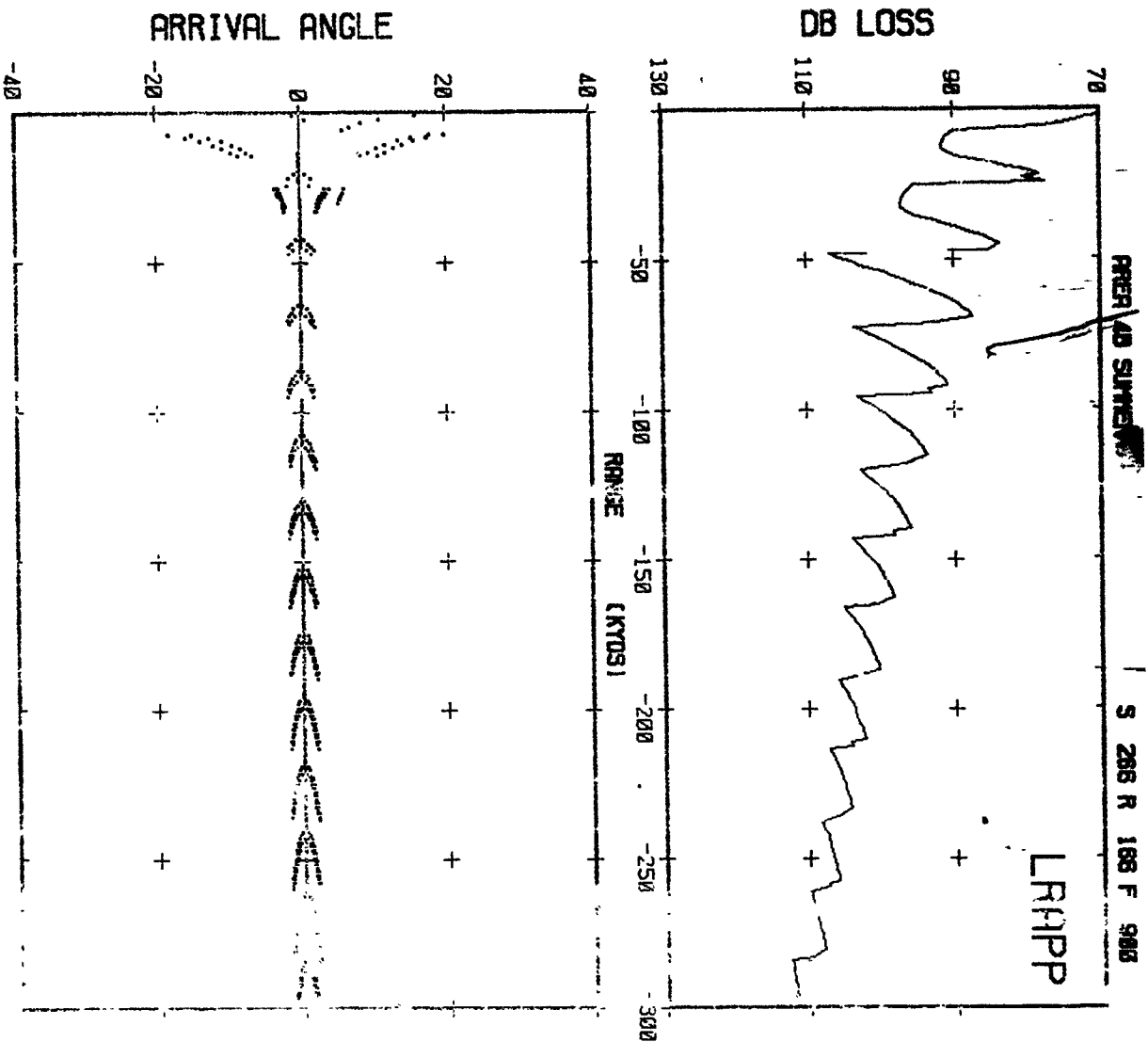


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ARRIVAL ANGLE



TOTAL -40.9 DB

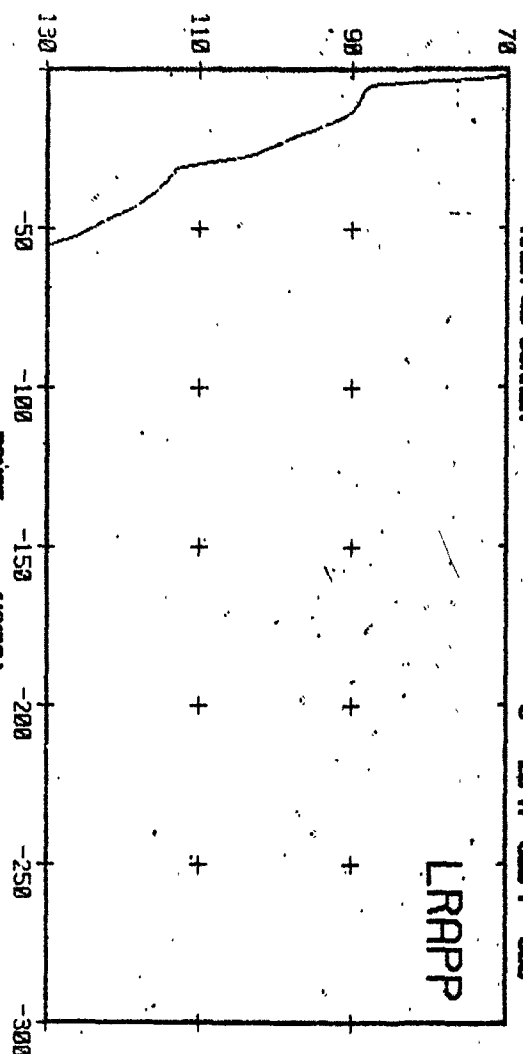


RIVER AB SUMMER

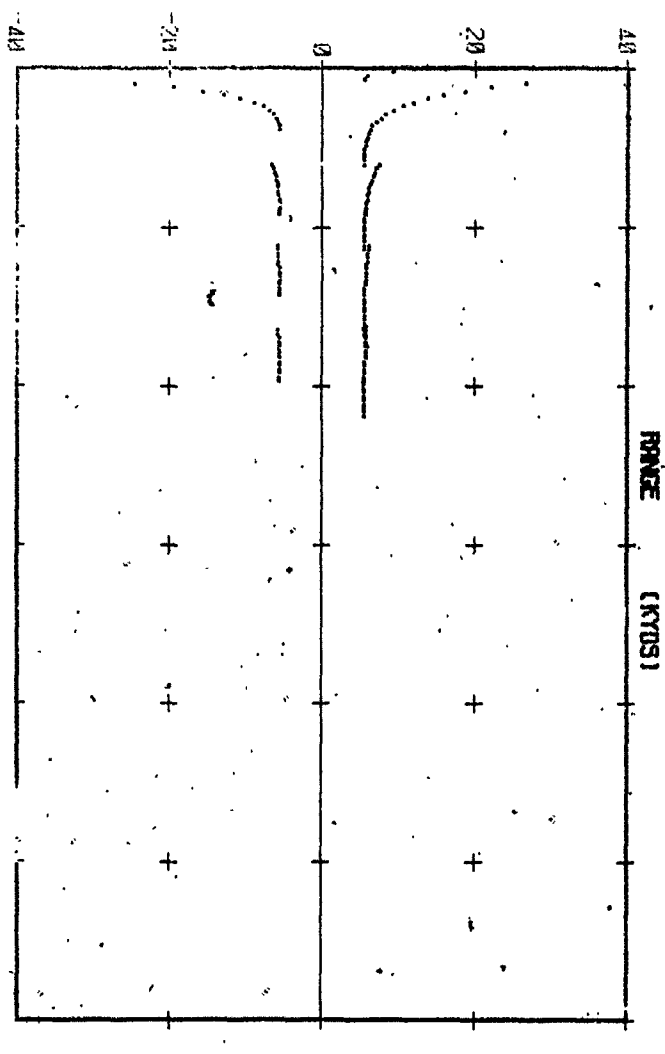
S 20 R 300 F 900

1450 M/S 1500 1550

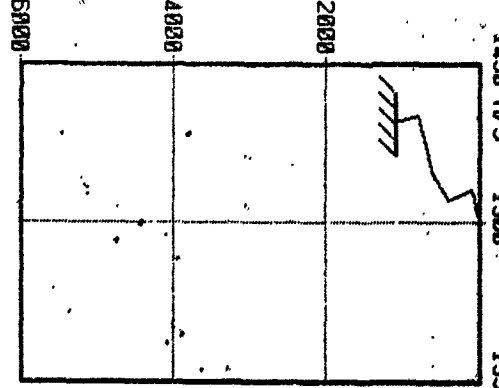
DB LOSS



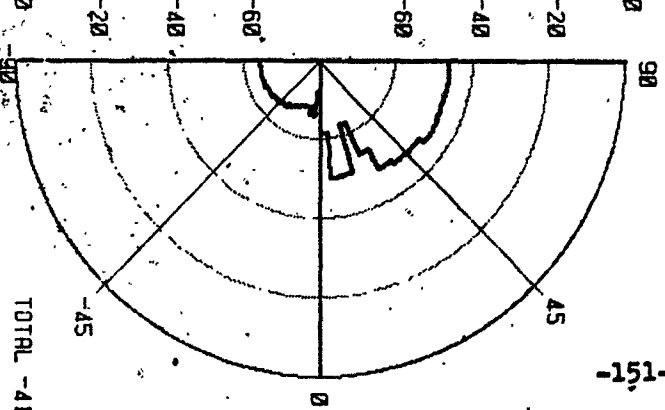
ARRIVAL ANGLE



DEPTH IN METERS



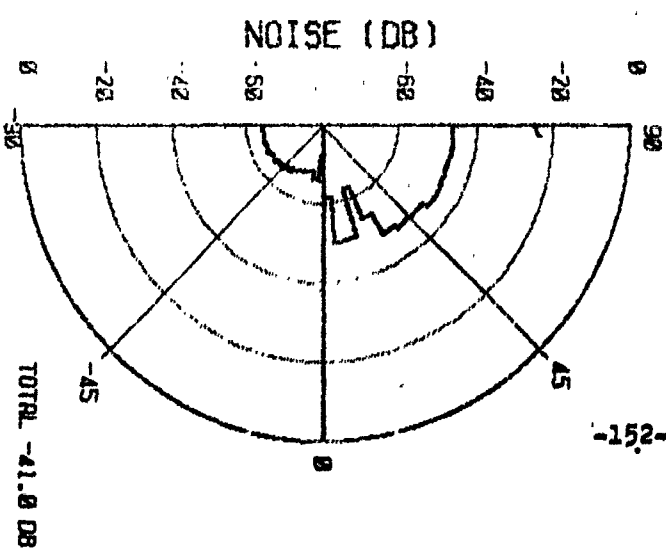
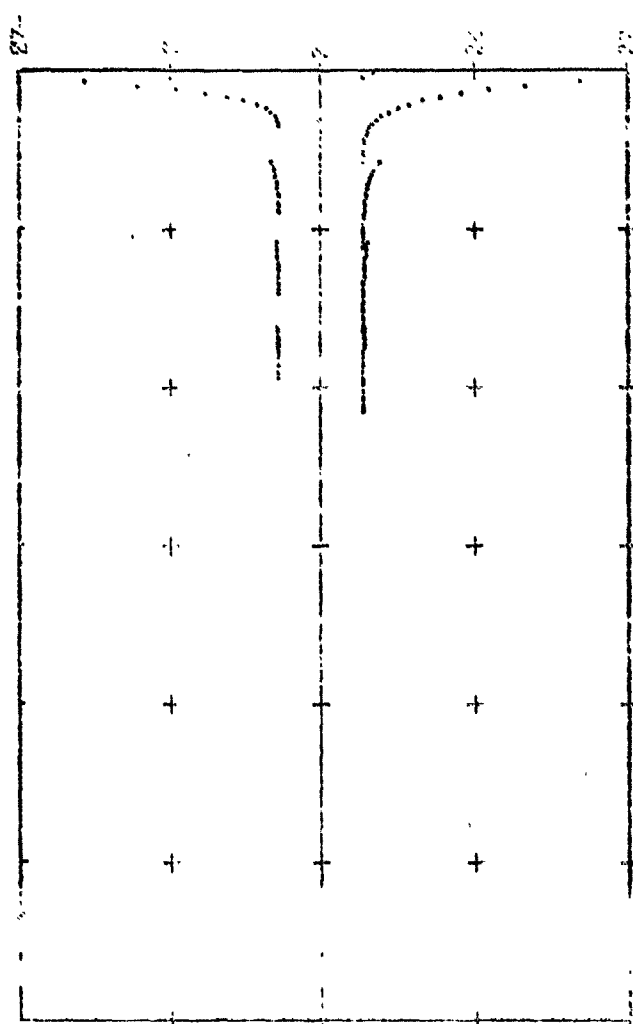
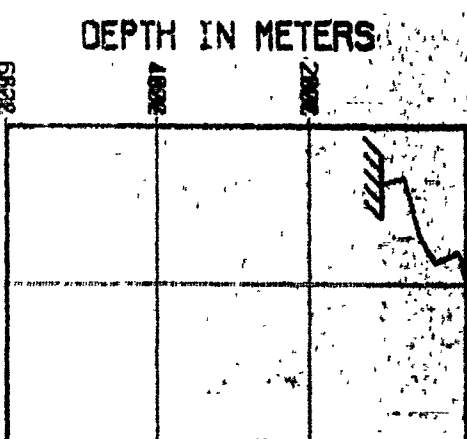
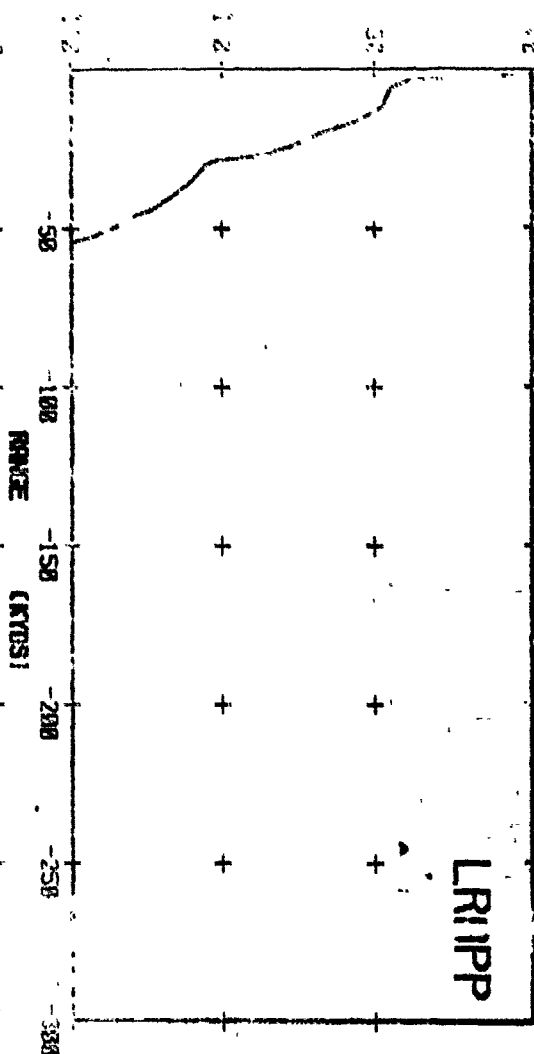
NOISE (DB)

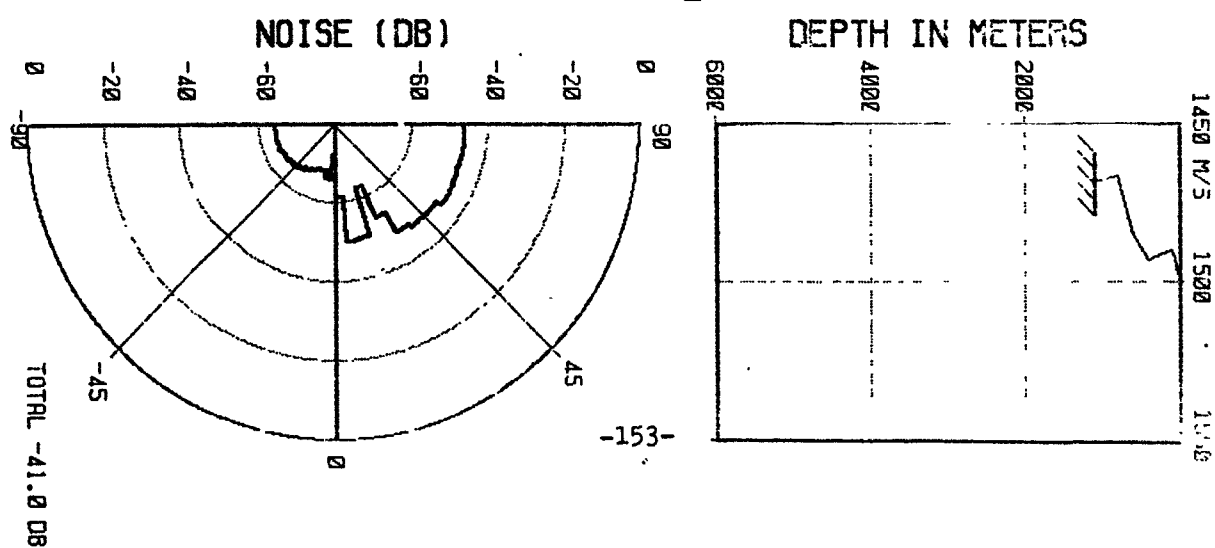
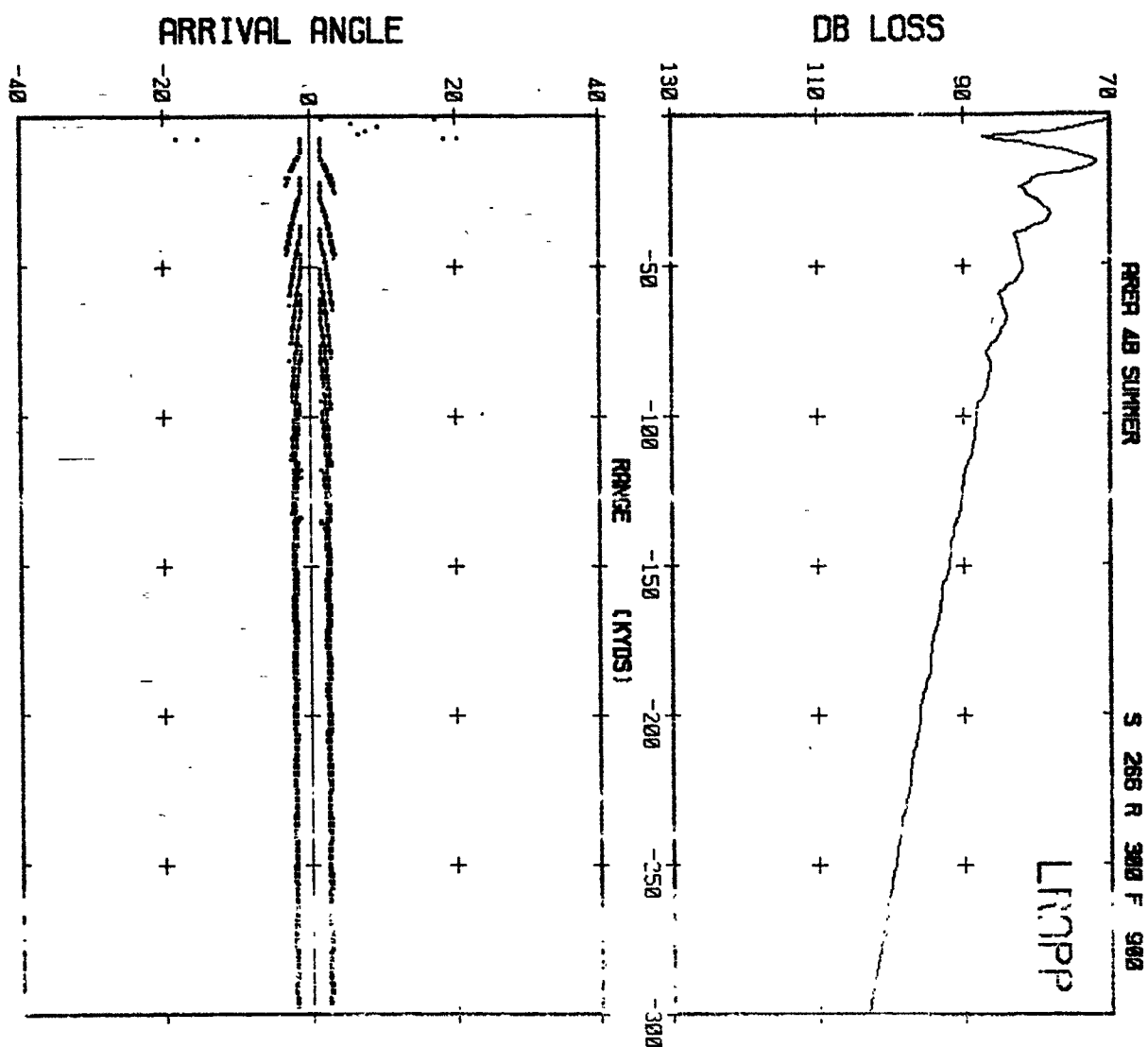


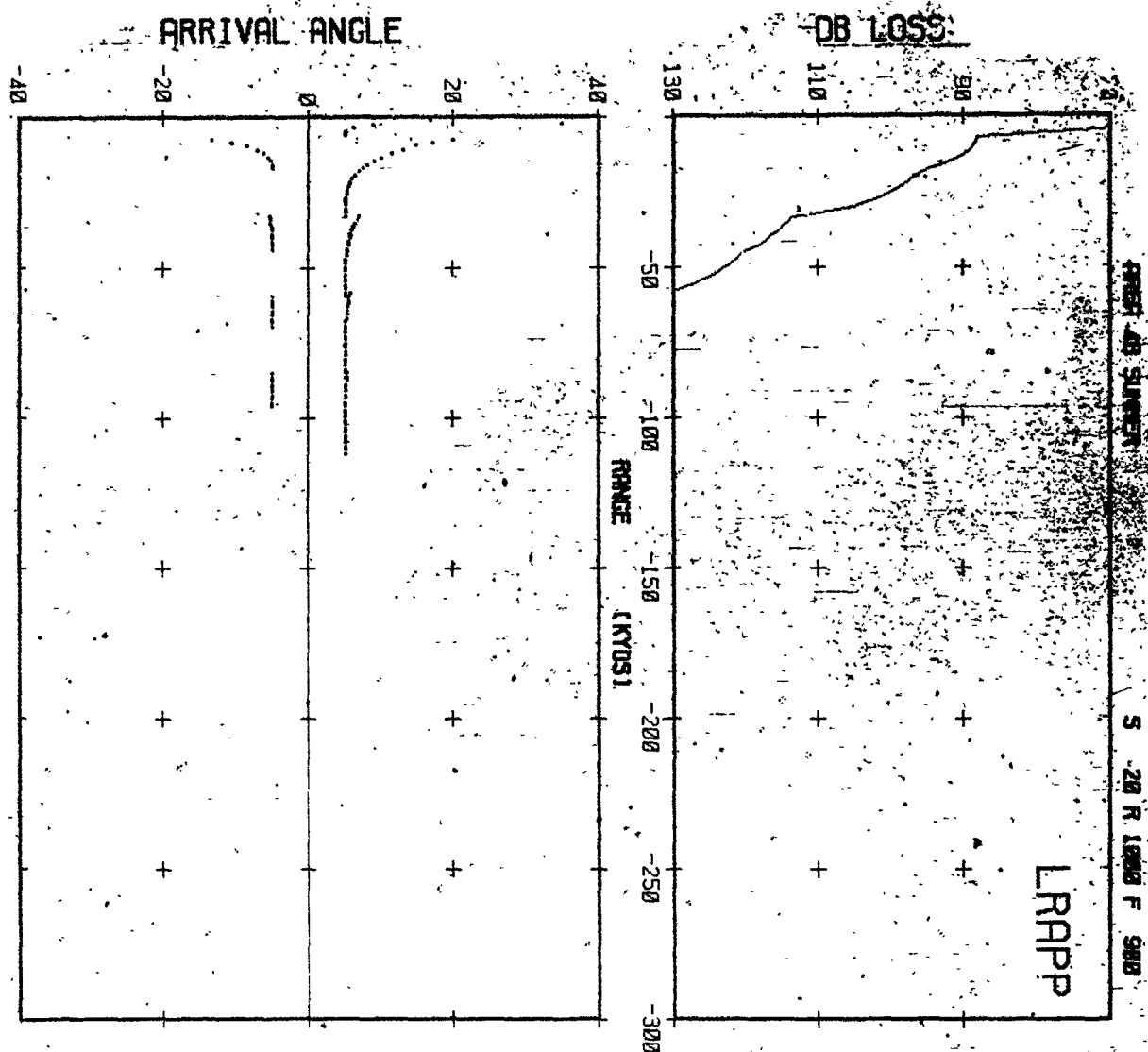
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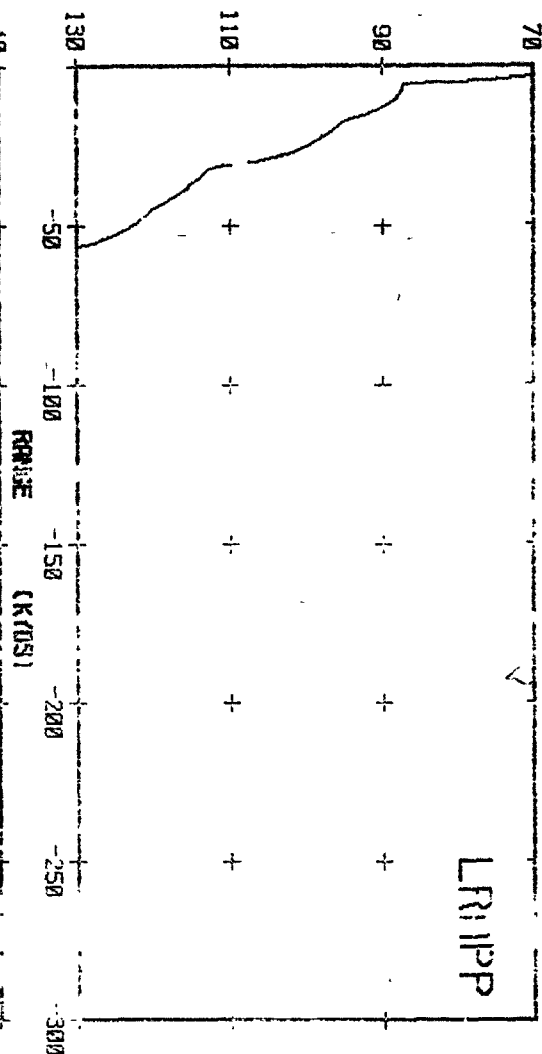


REFR AB SURFAC

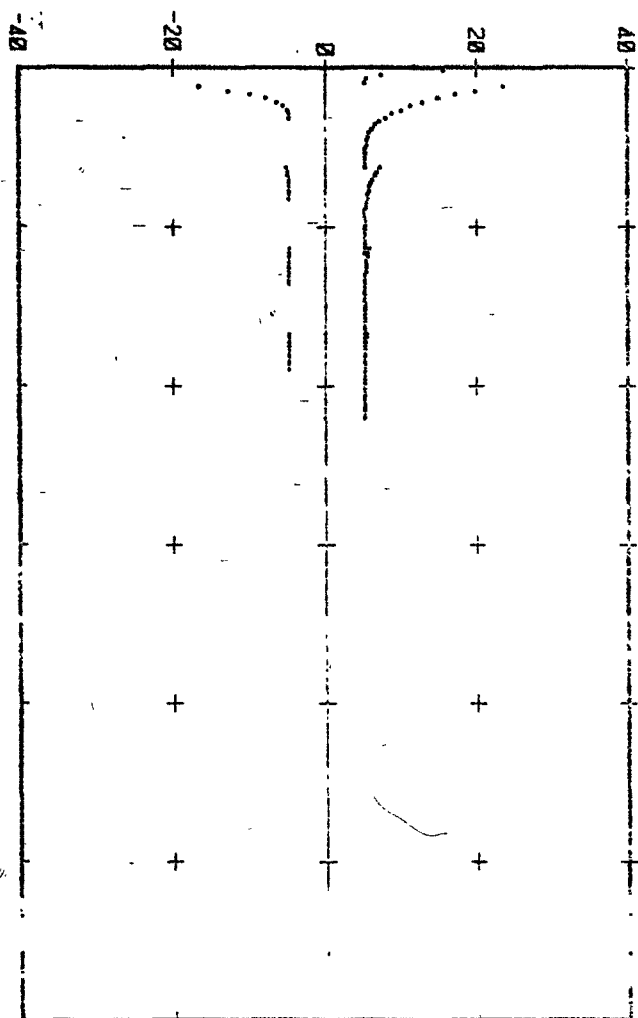
9 50 R 1000 F 989

1450 M/S 1500 1550

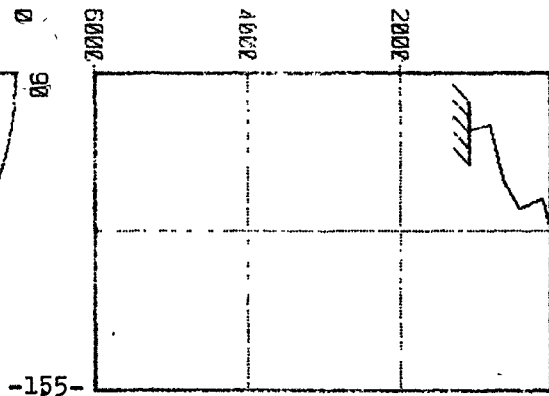
DB LOSS



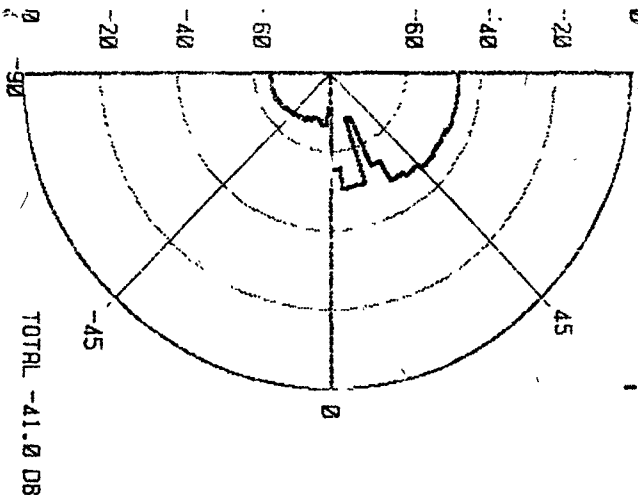
ARRIVAL ANGLE



DEPTH IN METERS

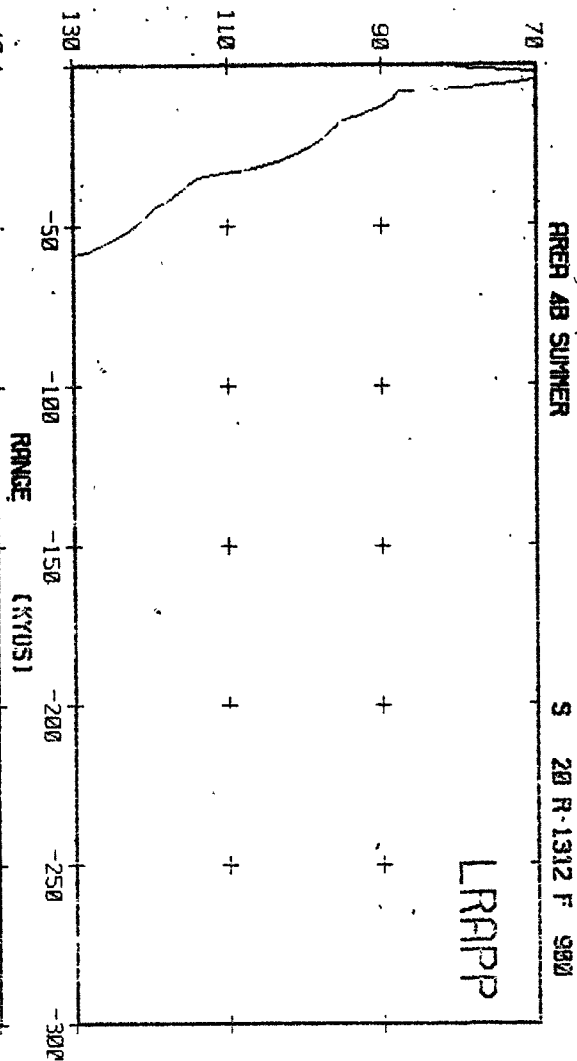


NOISE (DB)

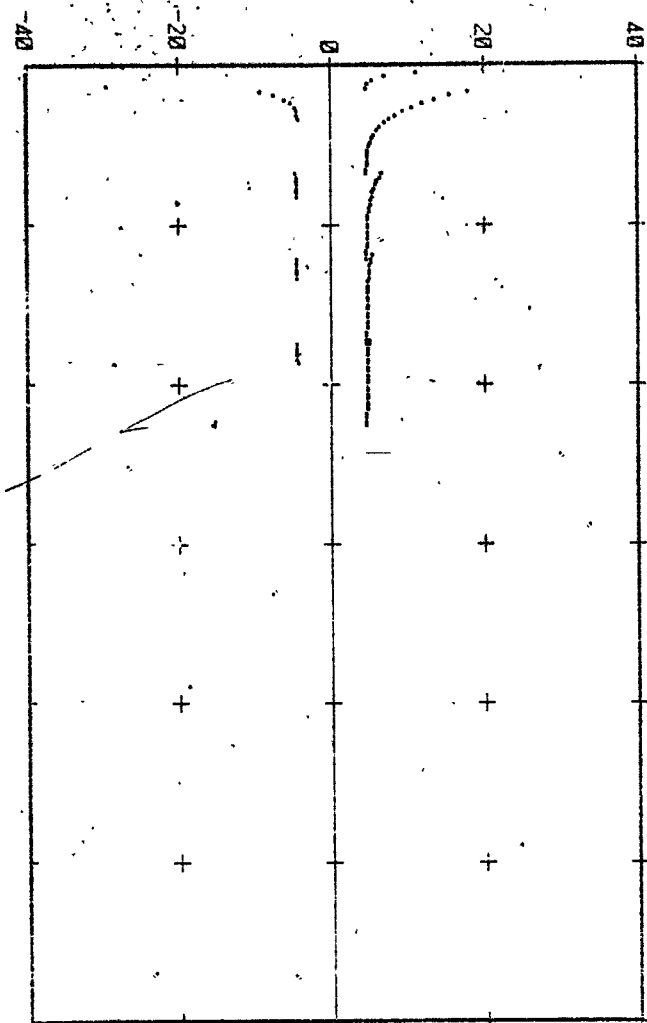


TOTAL -41.0 DB

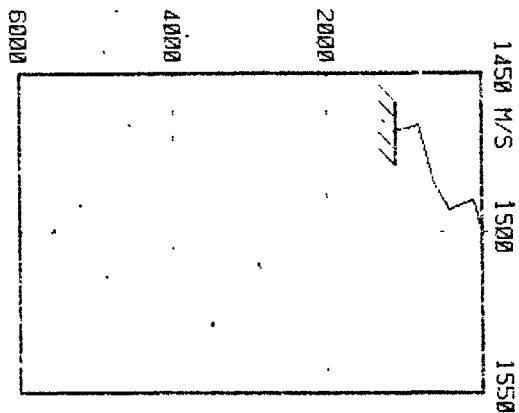
DB LOSS



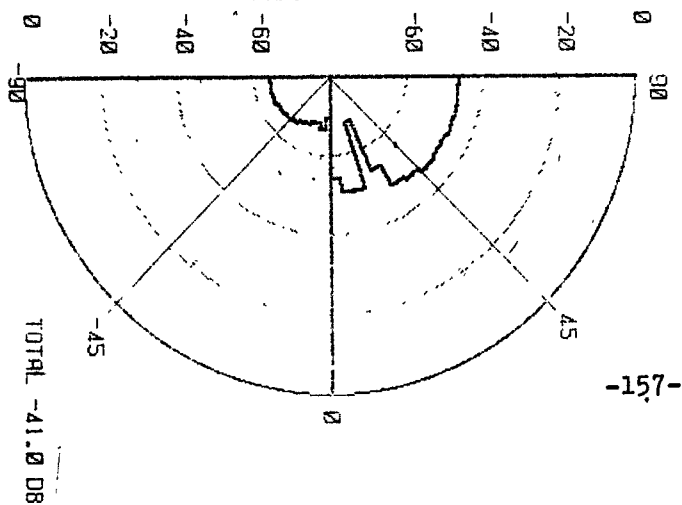
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



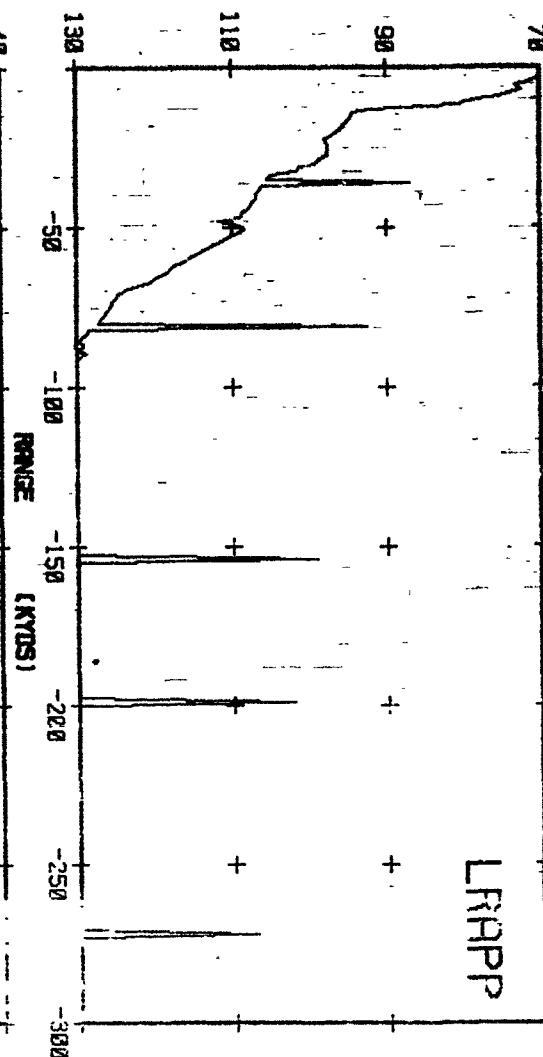
RIVER AS SUMMER

S 268 R 1312 F 900

1450 M 1530

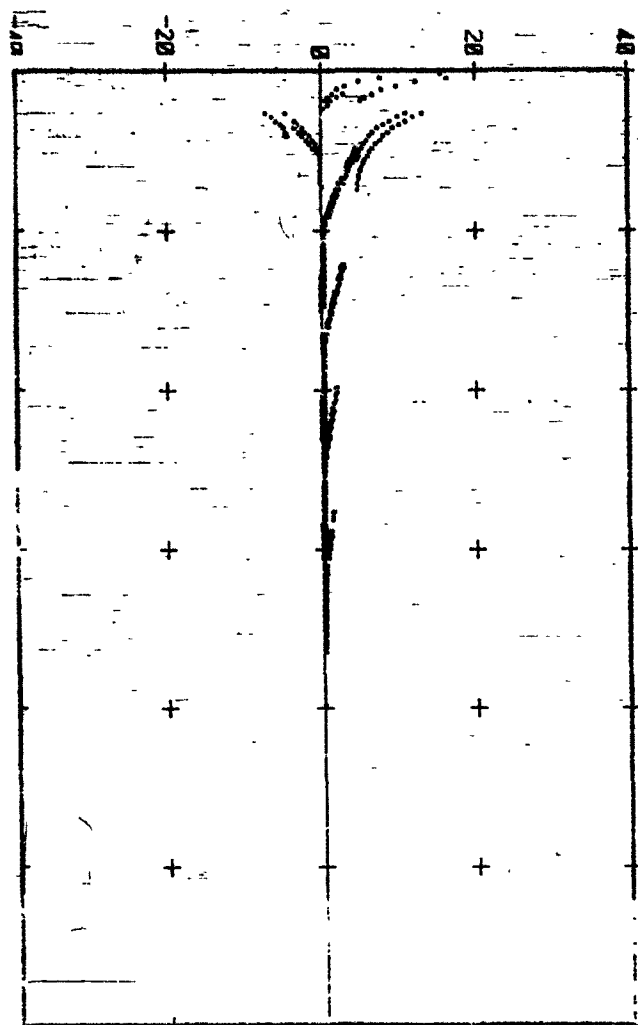
15

DB LOSS

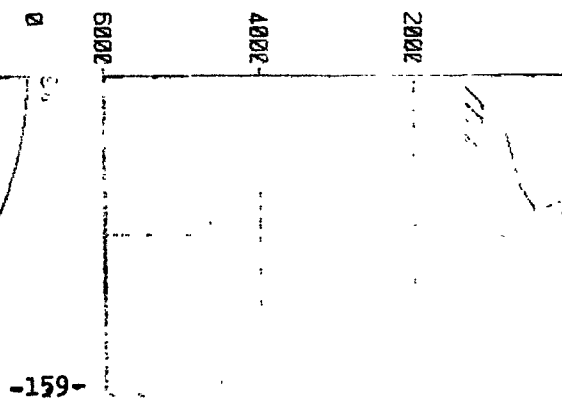


LRAPP

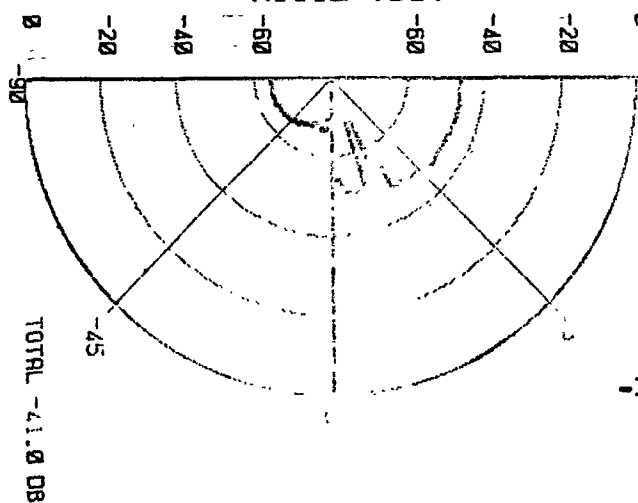
ARRIVAL ANGLE



DEPTH IN METERS

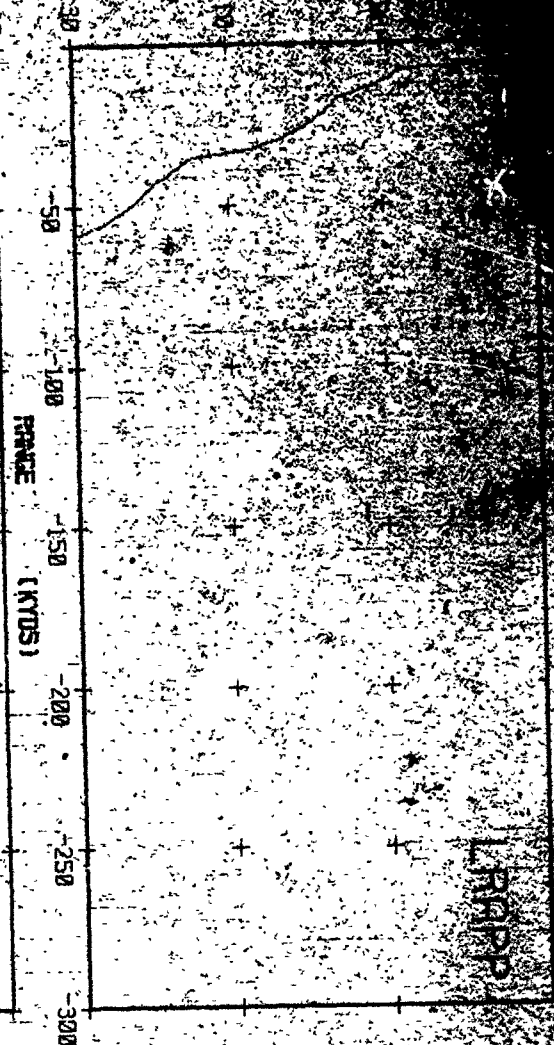
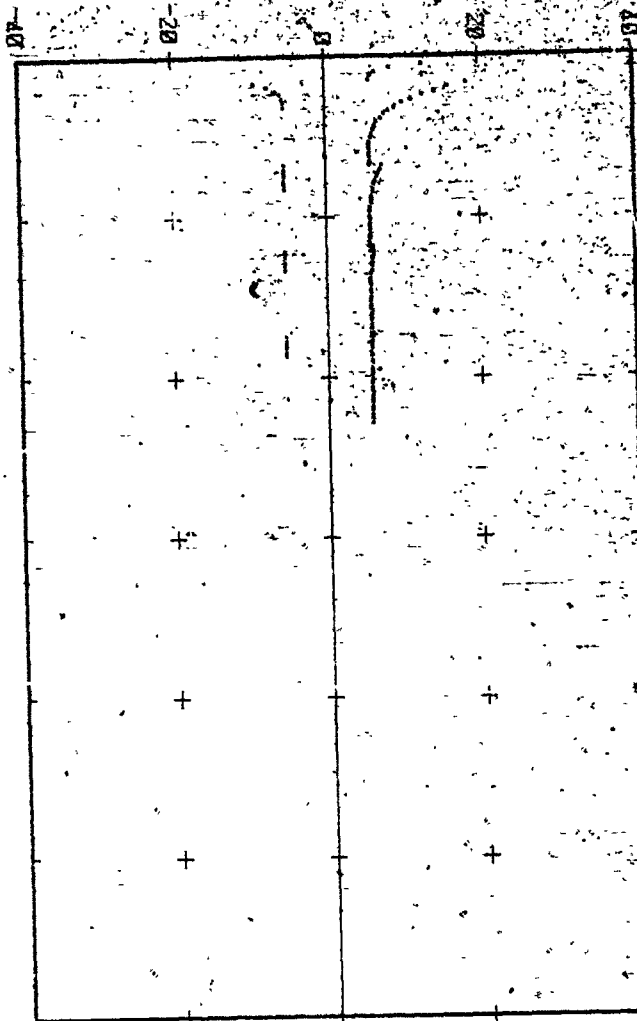


NOISE (DB)

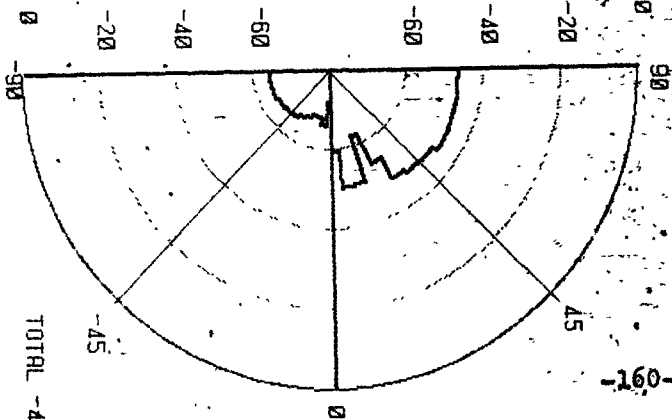


TOTAL -41.0 DB

ARRIVAL ANGLE



NOISE (DB)



DEPTH IN METERS



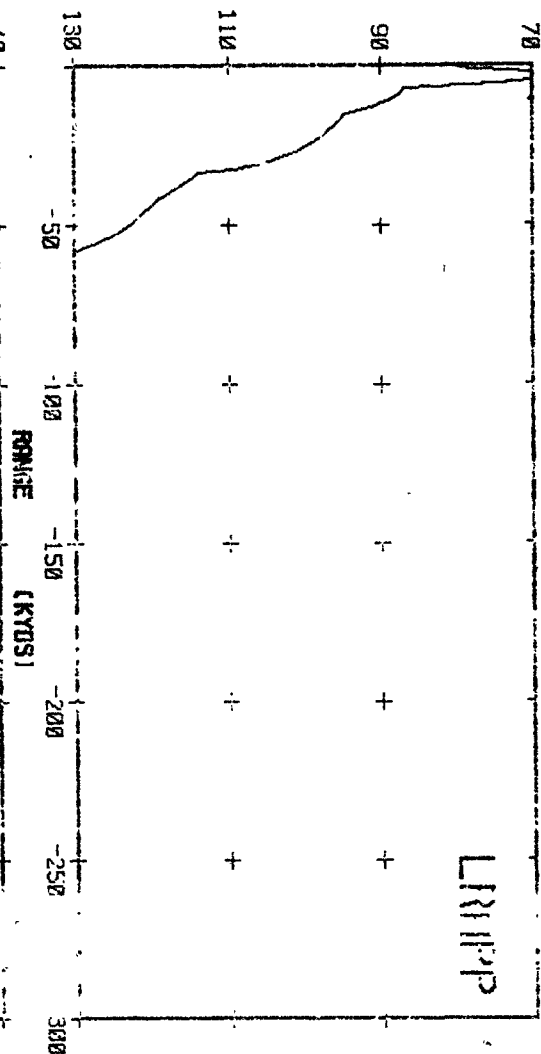
TOTAL -41.1 DB

RICH AB SUMMER

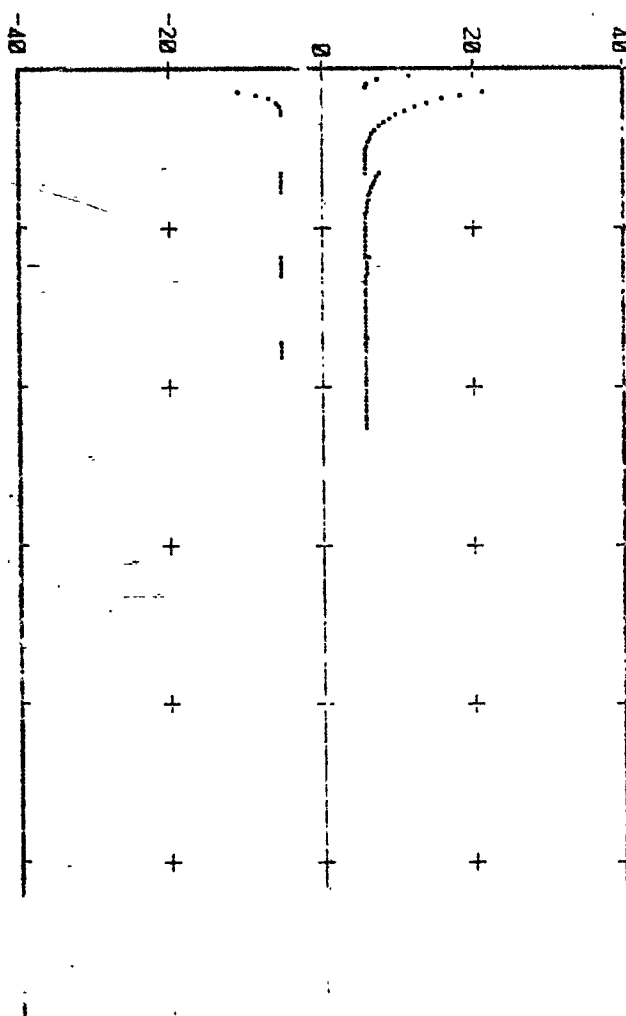
S 50 R 1500 F 000

1450 M/S 1500 1550

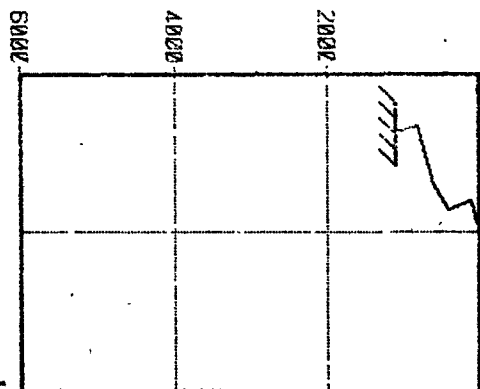
DB LOSS



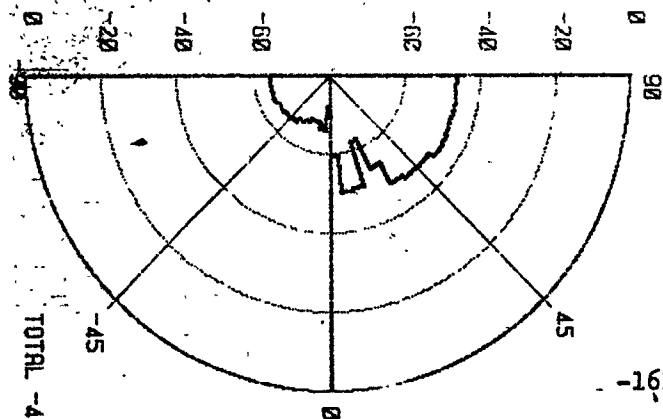
ARRIVAL ANGLE



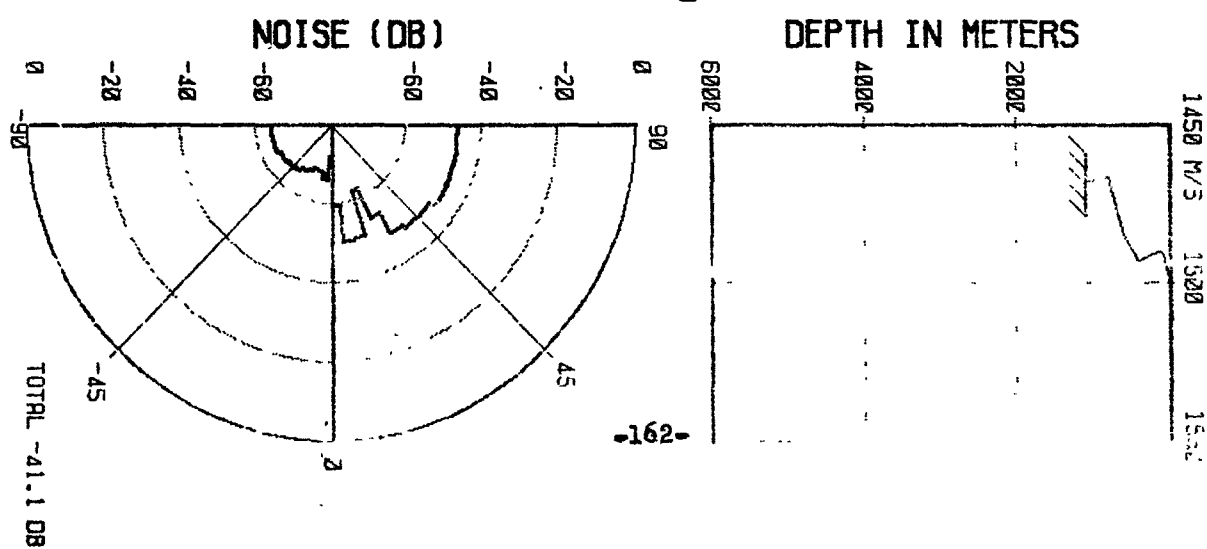
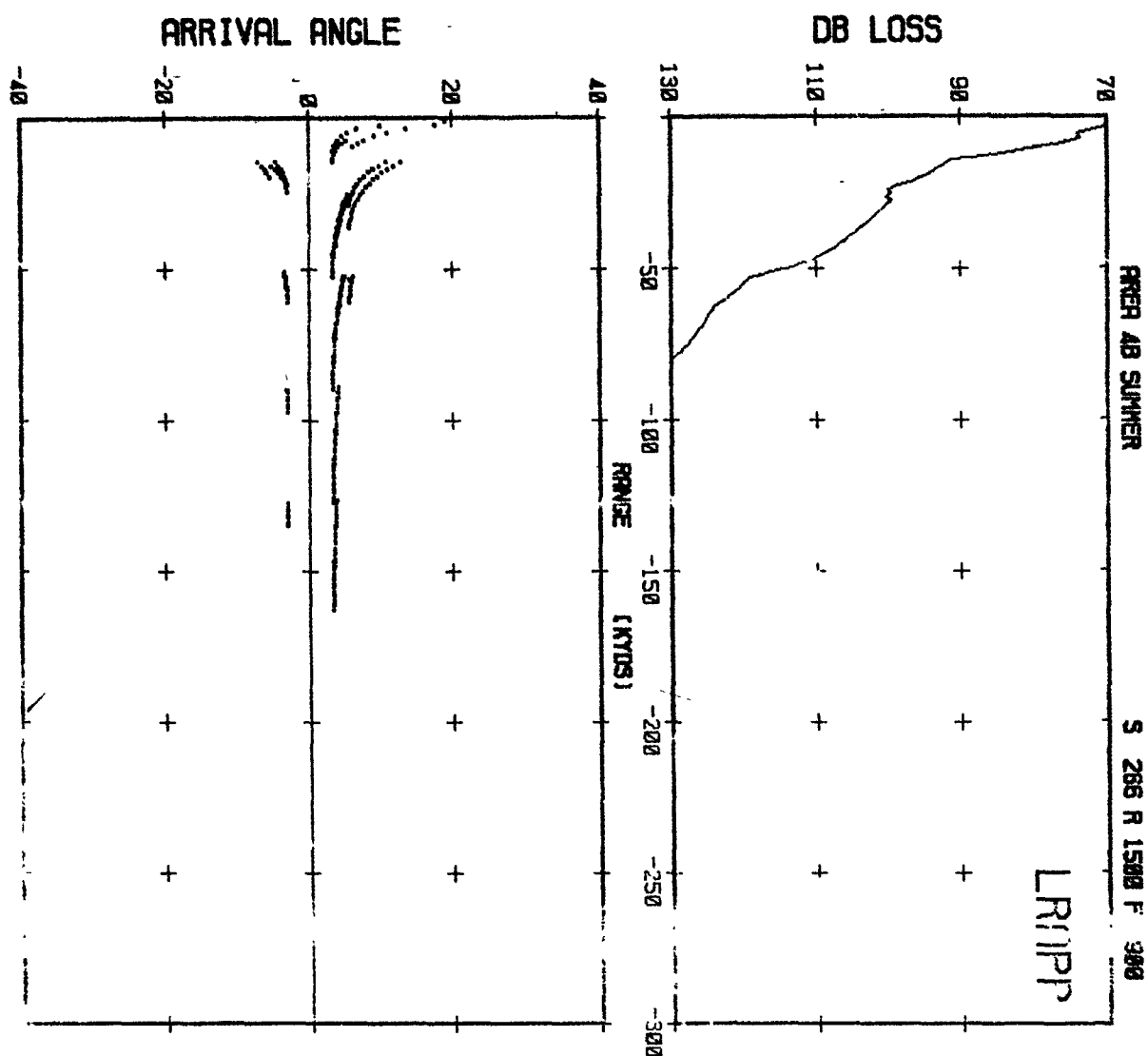
DEPTH IN METERS



NOISE (DB)



TOTAL -41.1 DB



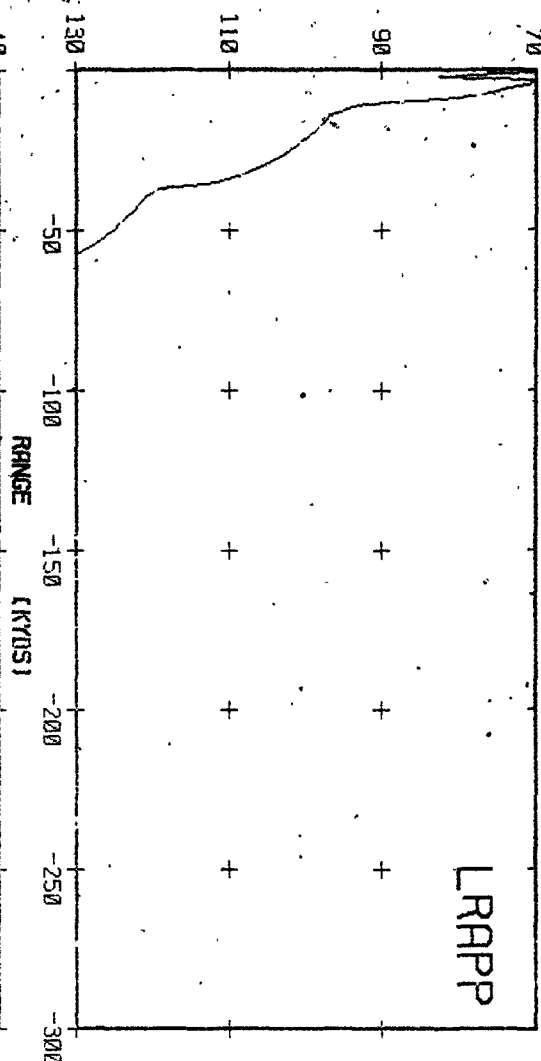
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PRER AB-SUMMER

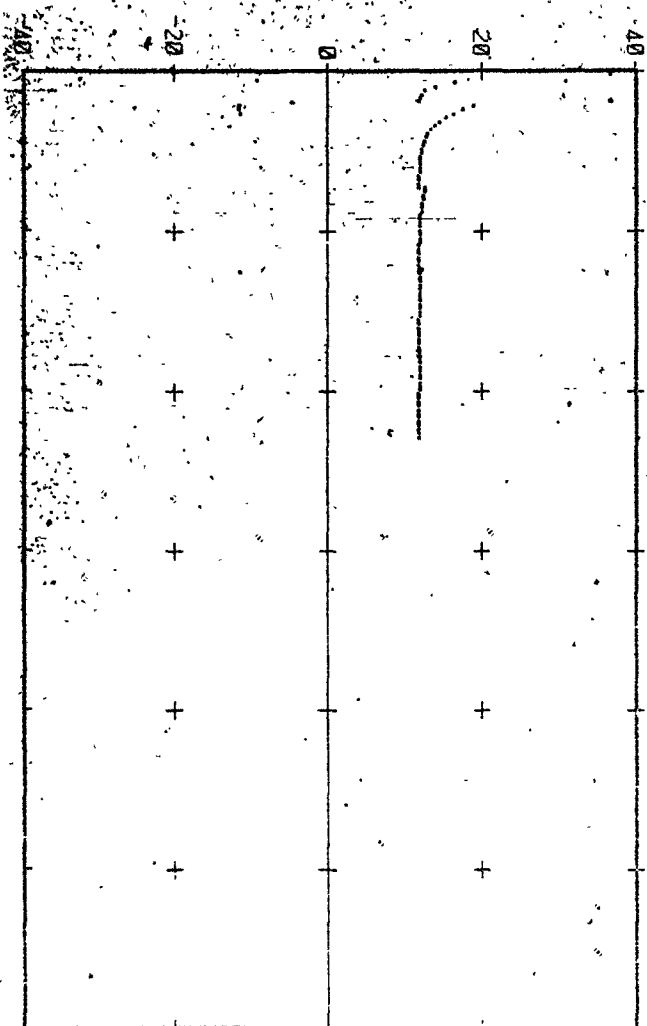
S 20 R 2625 F 900

1450 M/S 1500 1550

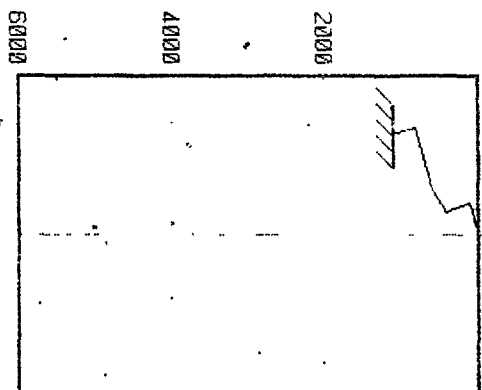
DB LOSS



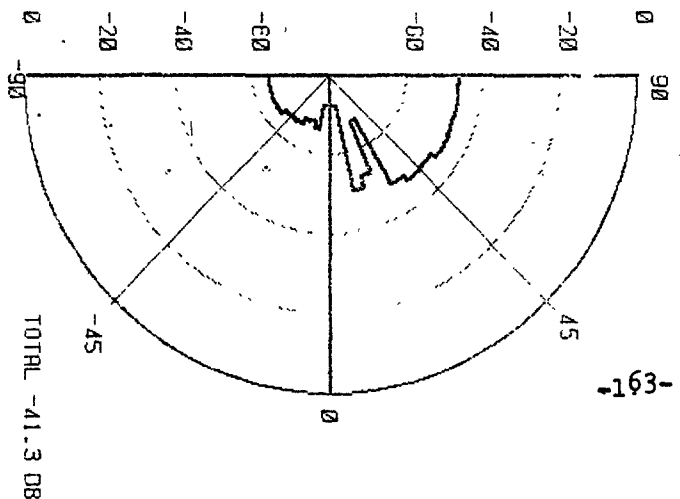
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

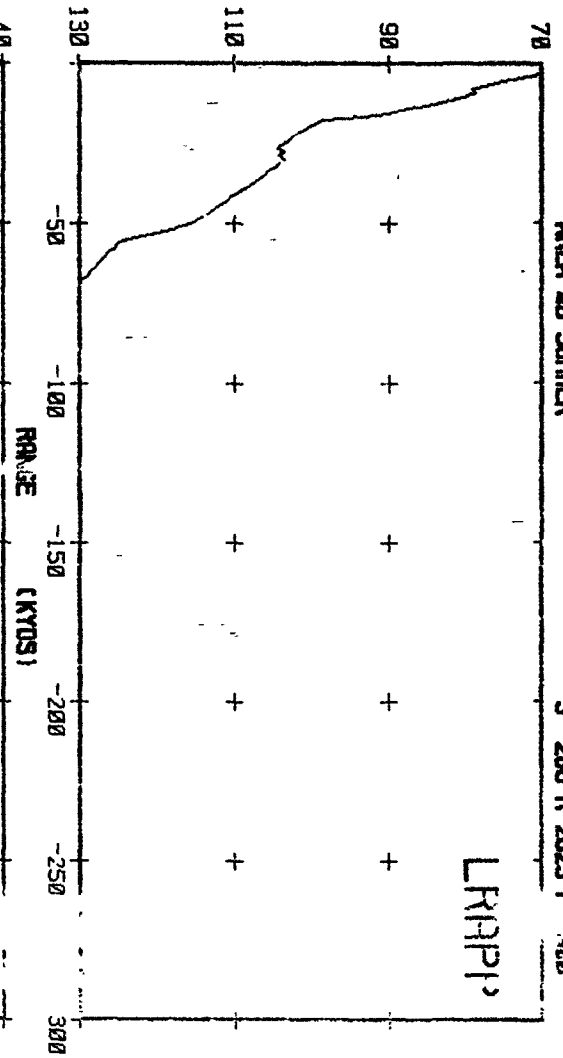


REVER AB SUMMER

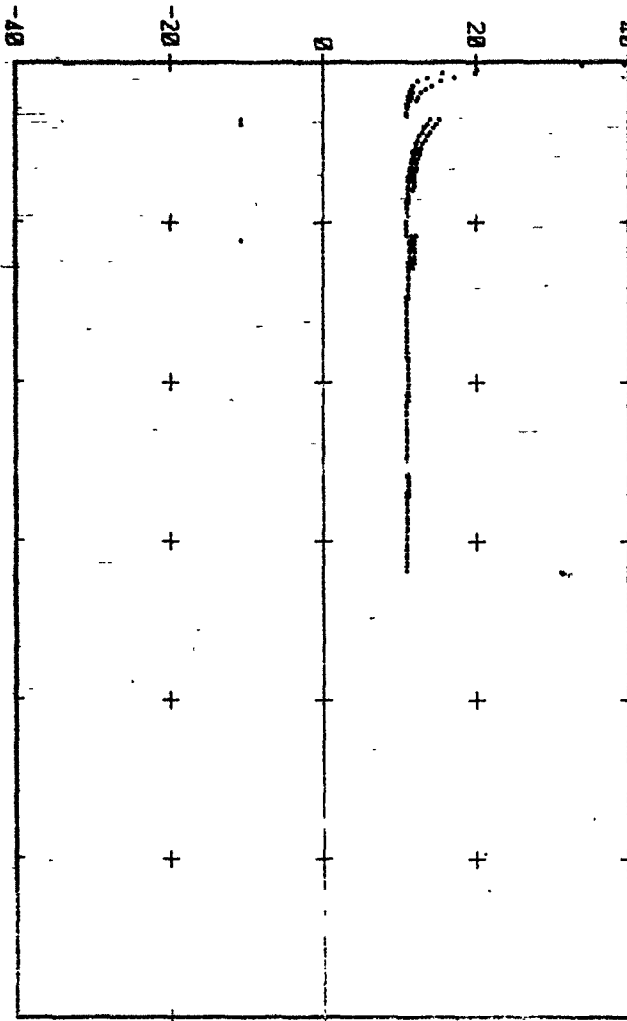
S 286 R 2625 F NDB

LRIAPP

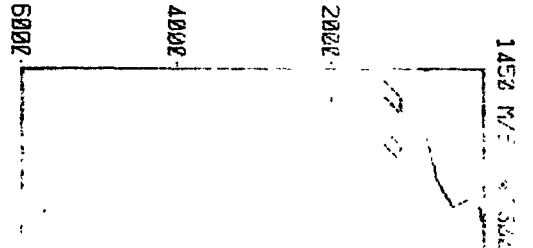
DB LOSS



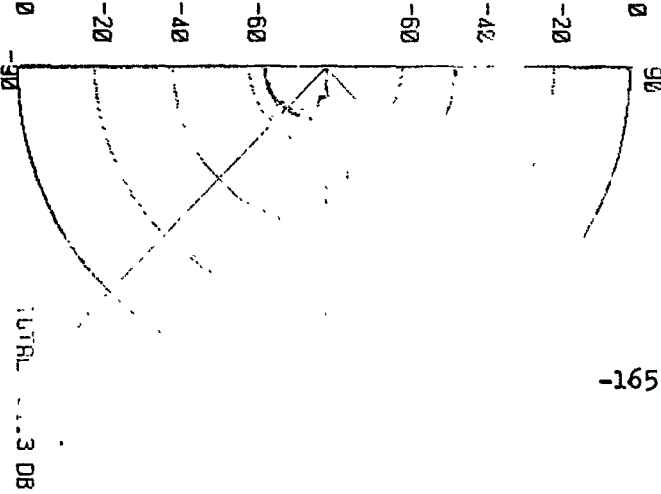
ARRIVAL ANGLE

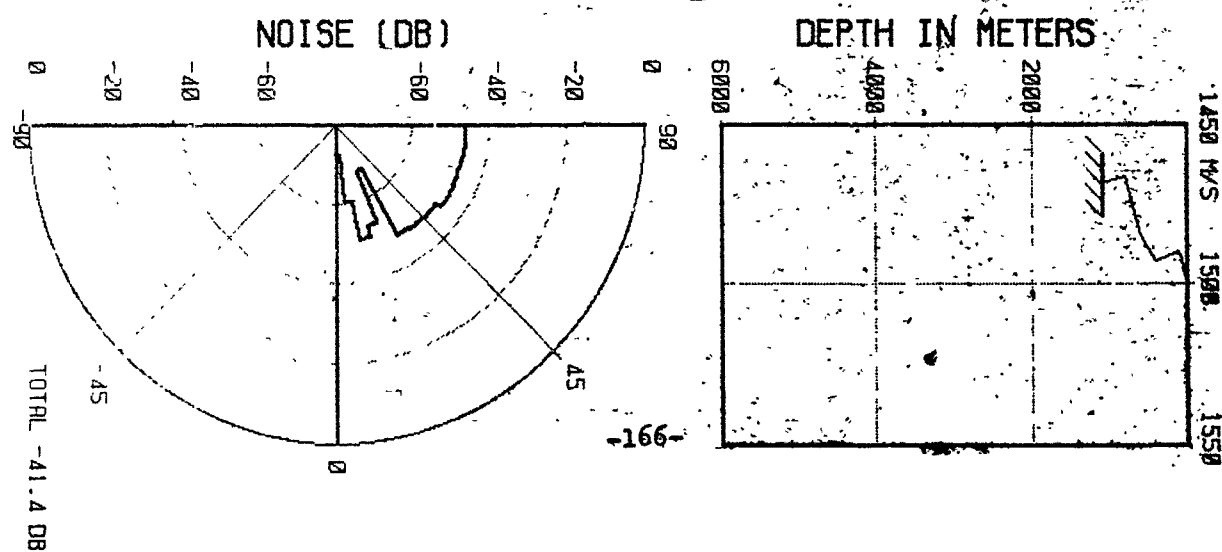
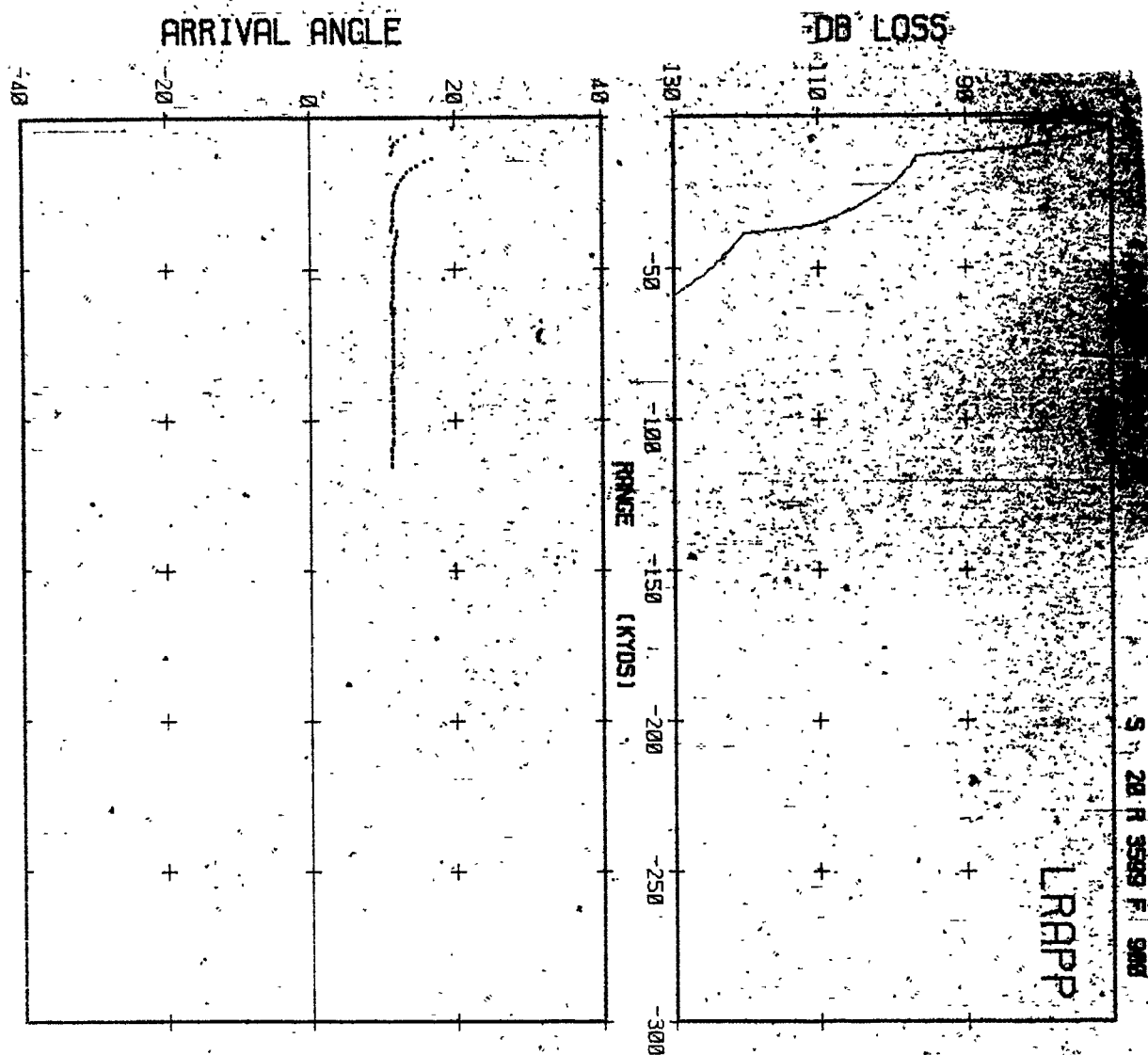


DEPTH IN METERS



NOISE (DB)



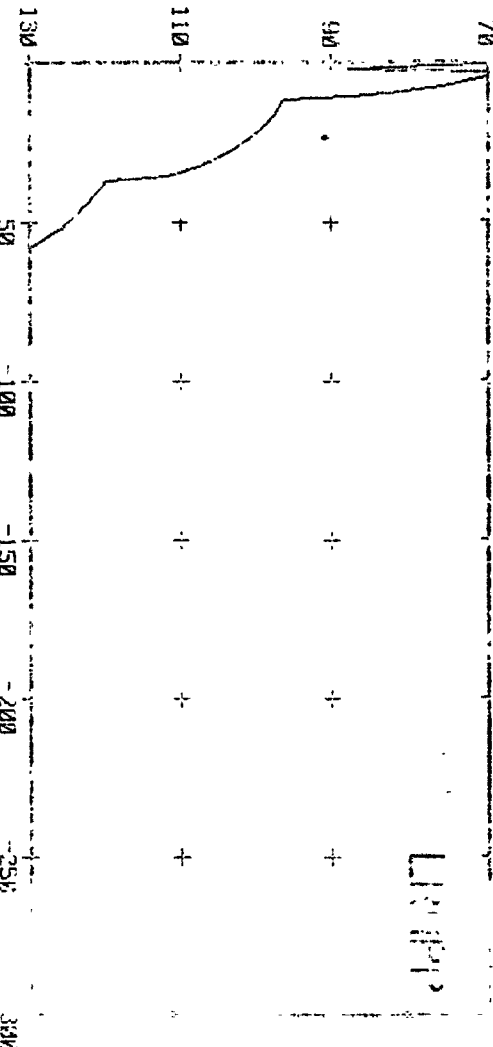


RIVER AIR SURFER

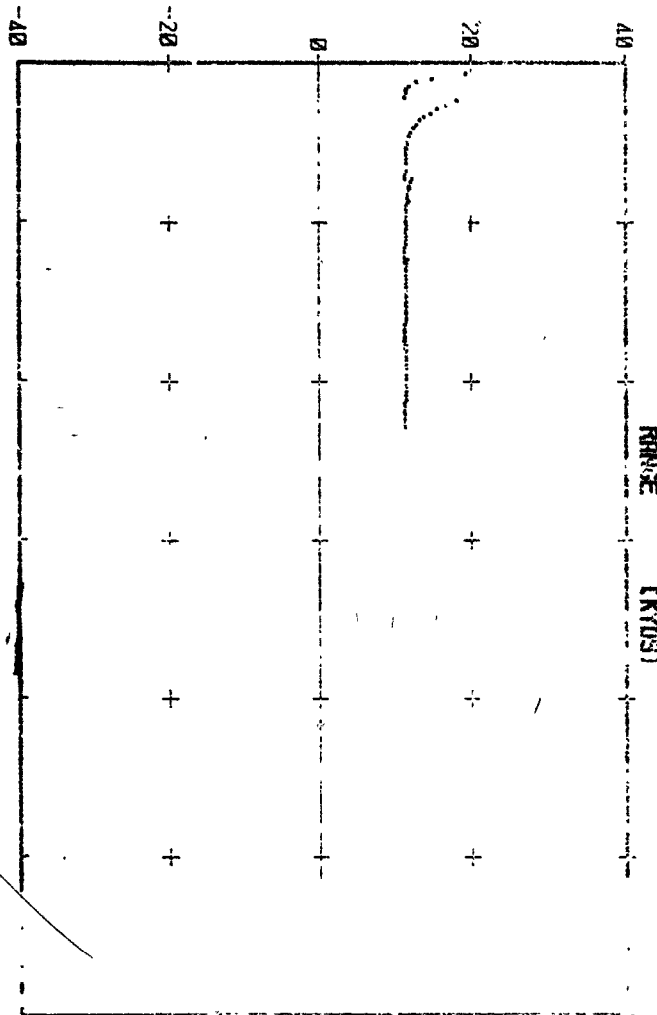
S 50 R 3500 1 001

1450 M/S 1520 1550

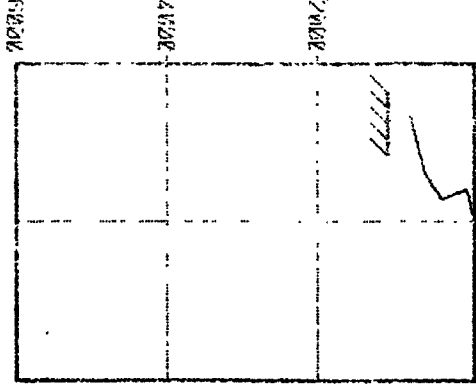
DB LOSS



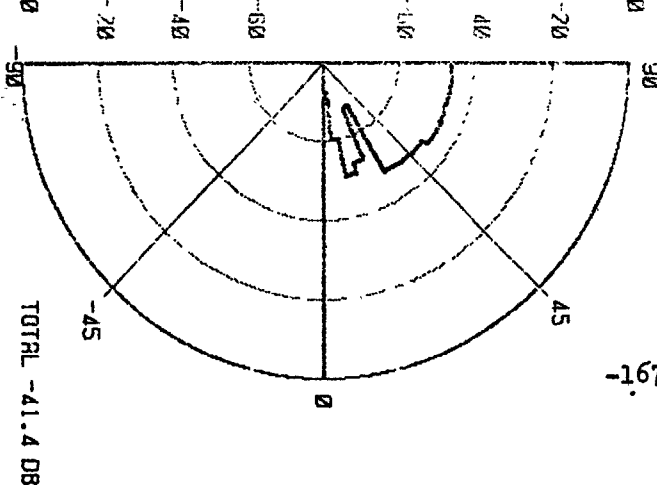
ARRIVAL ANGLE



DB LOSS

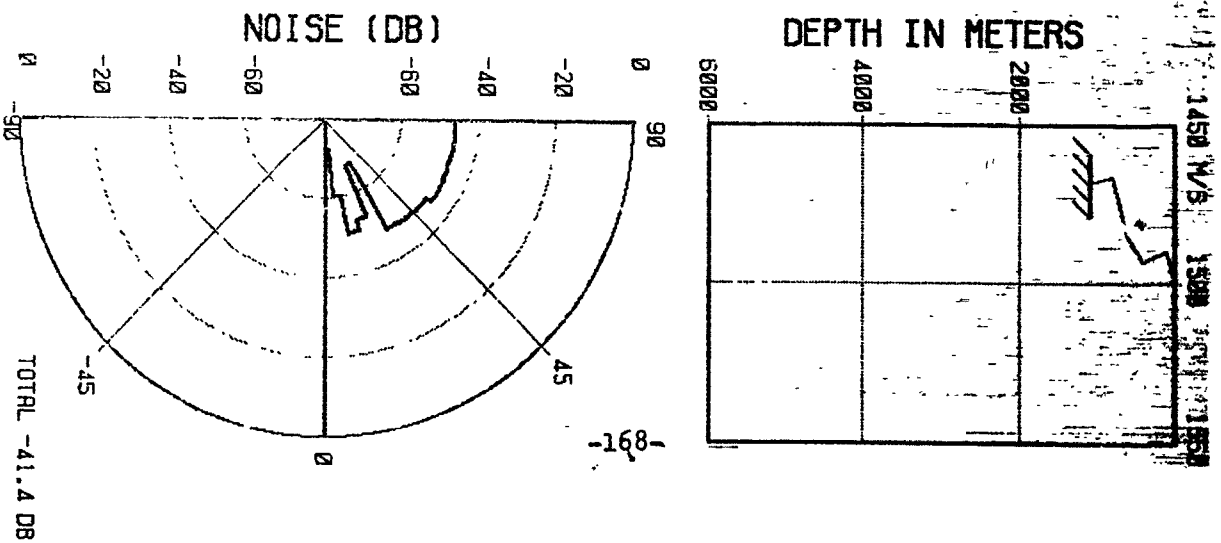
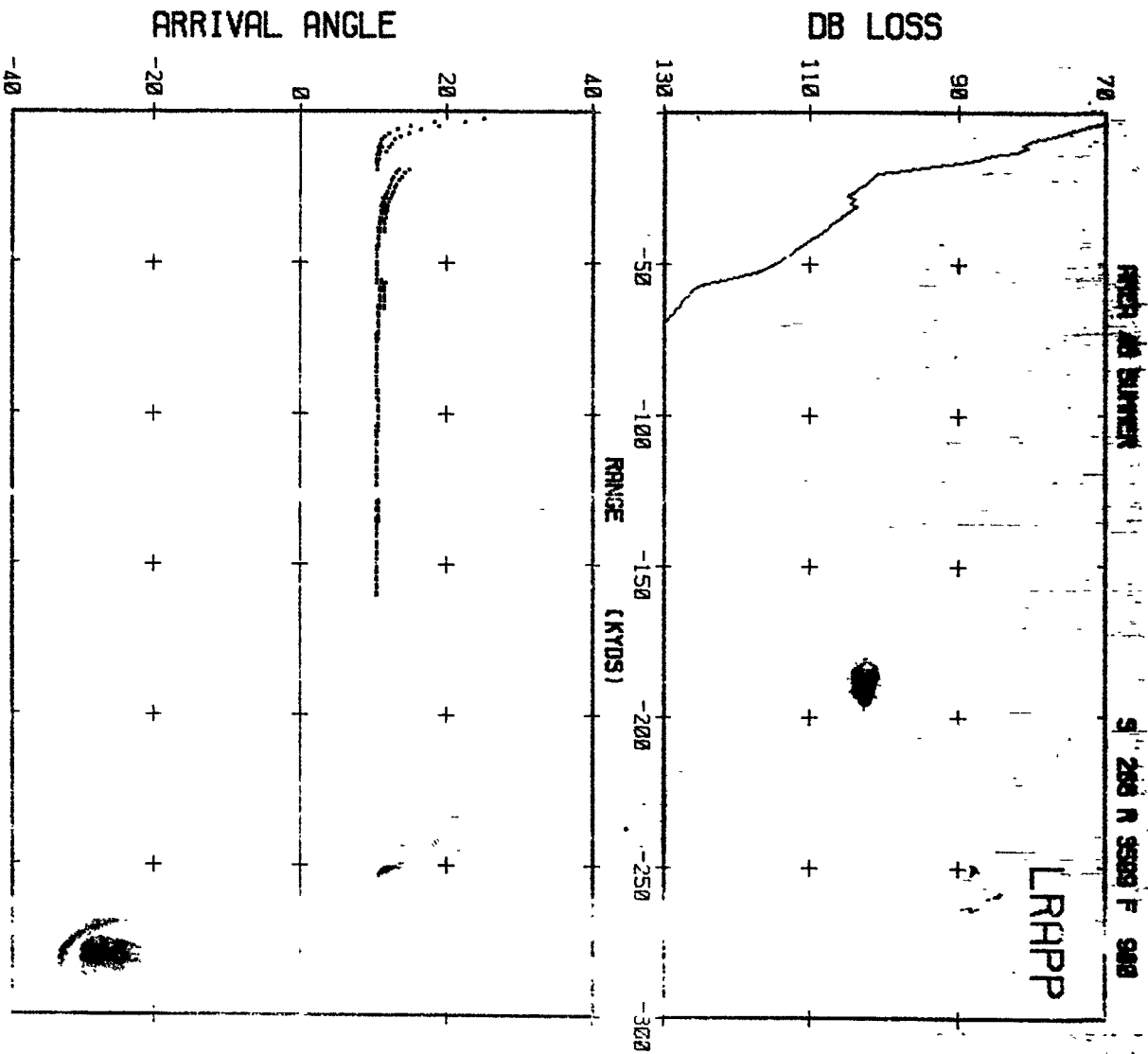


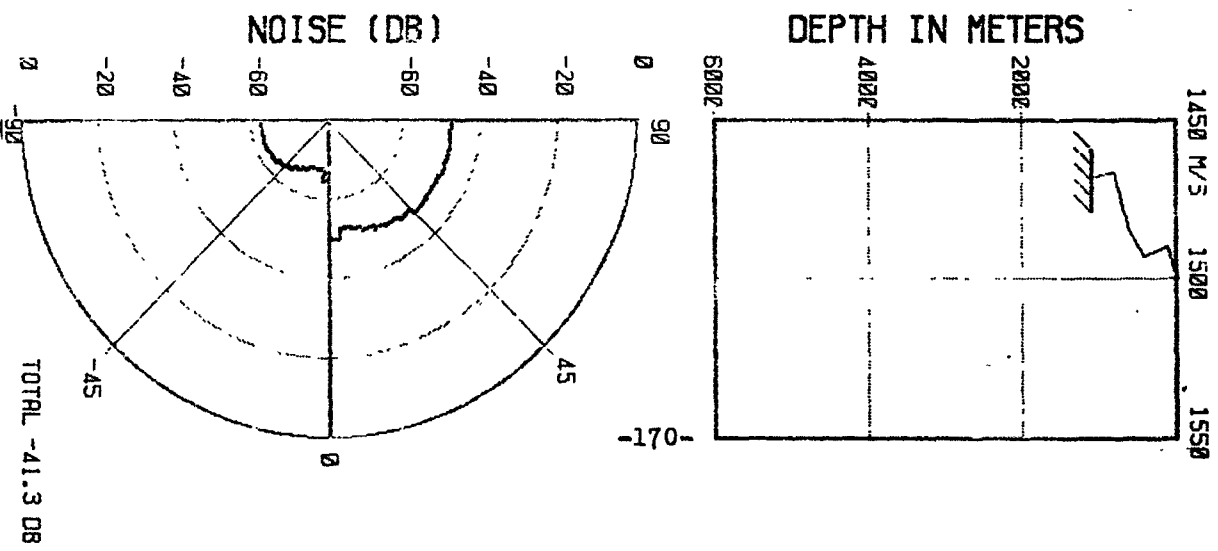
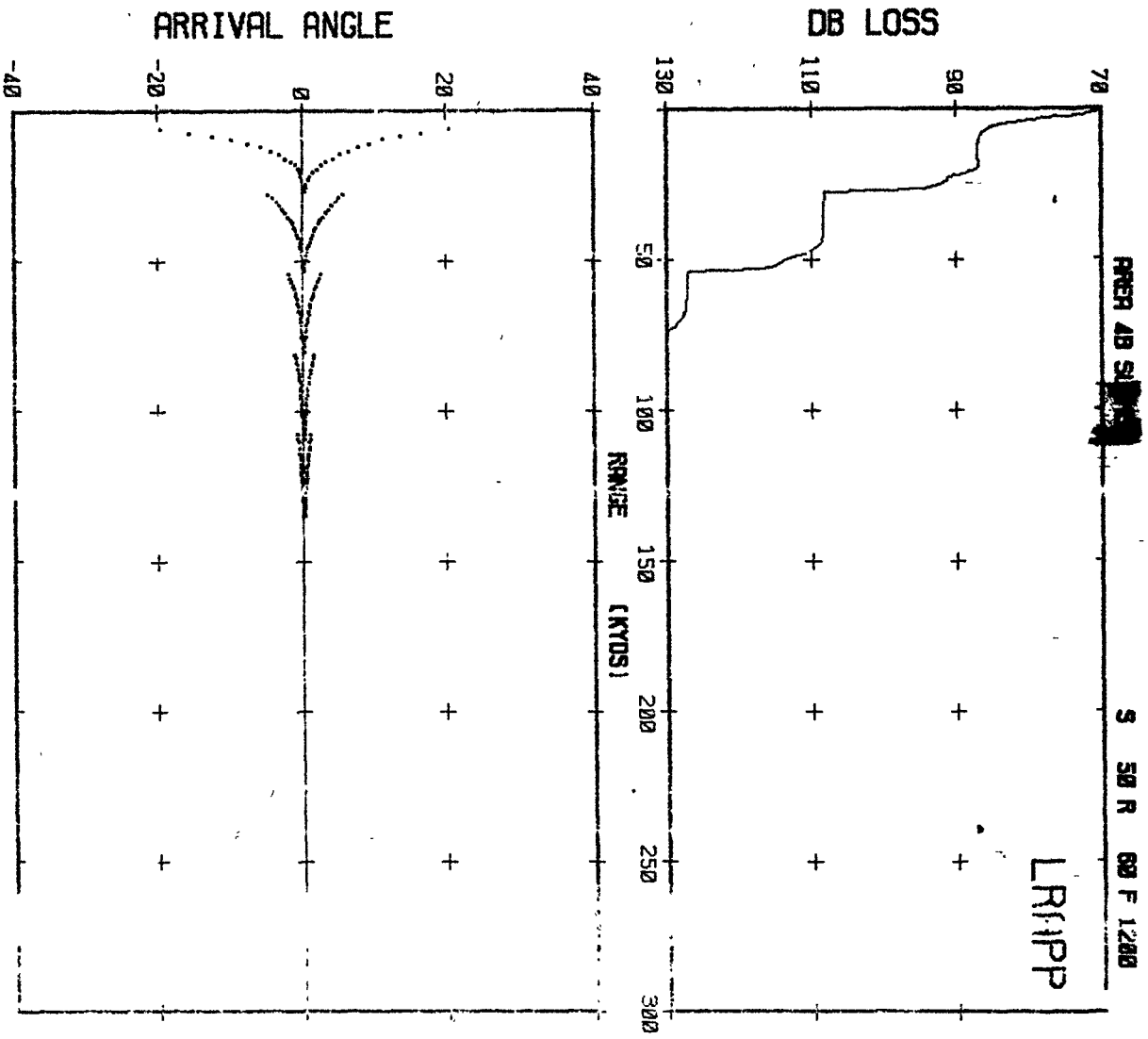
NOISE (DB)

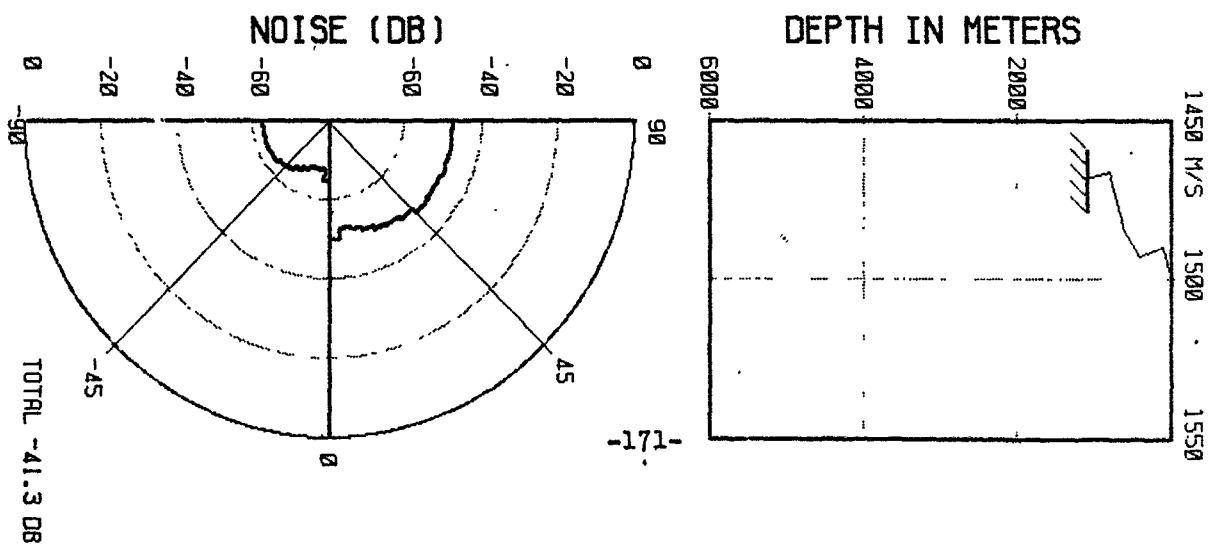
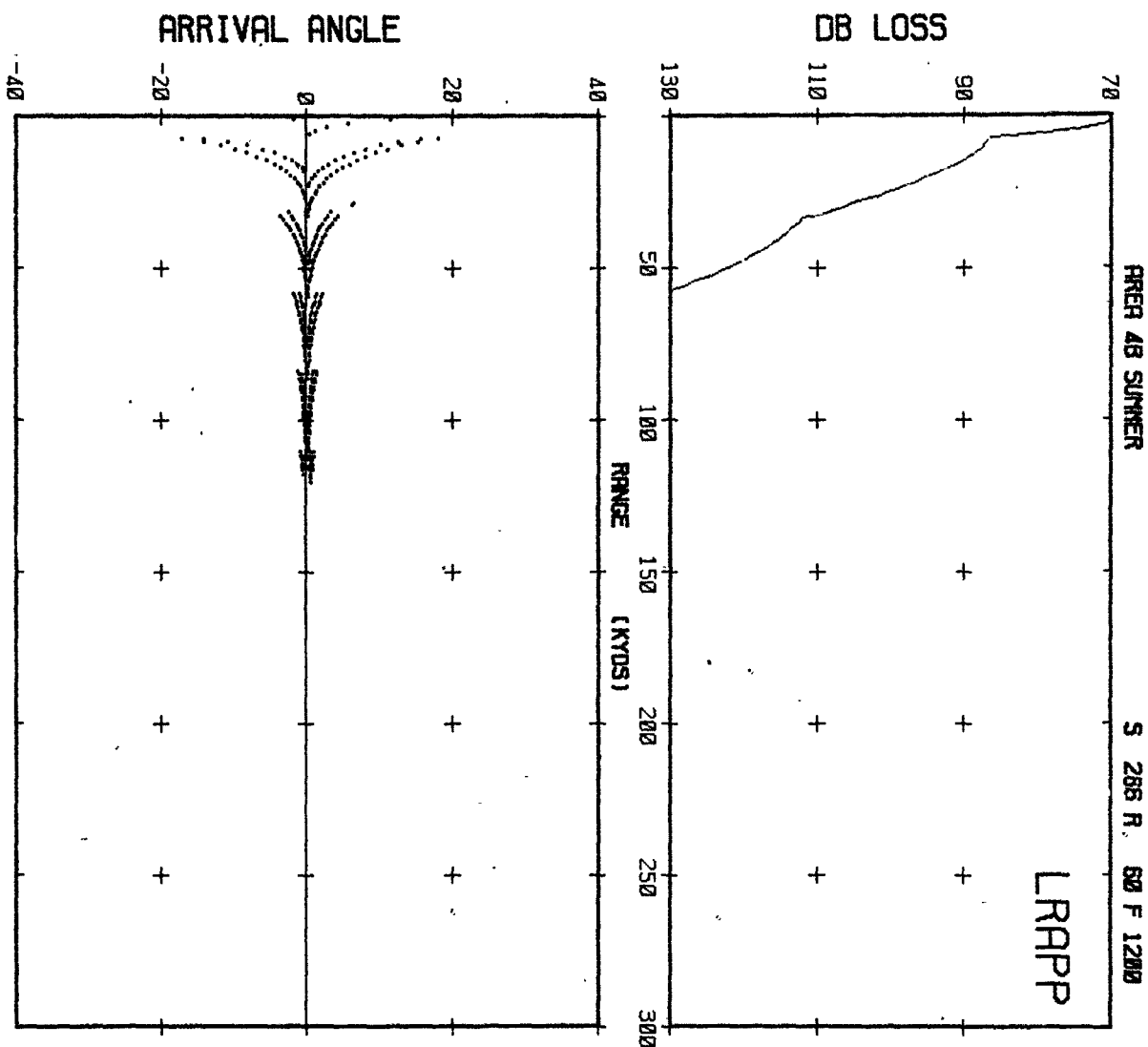


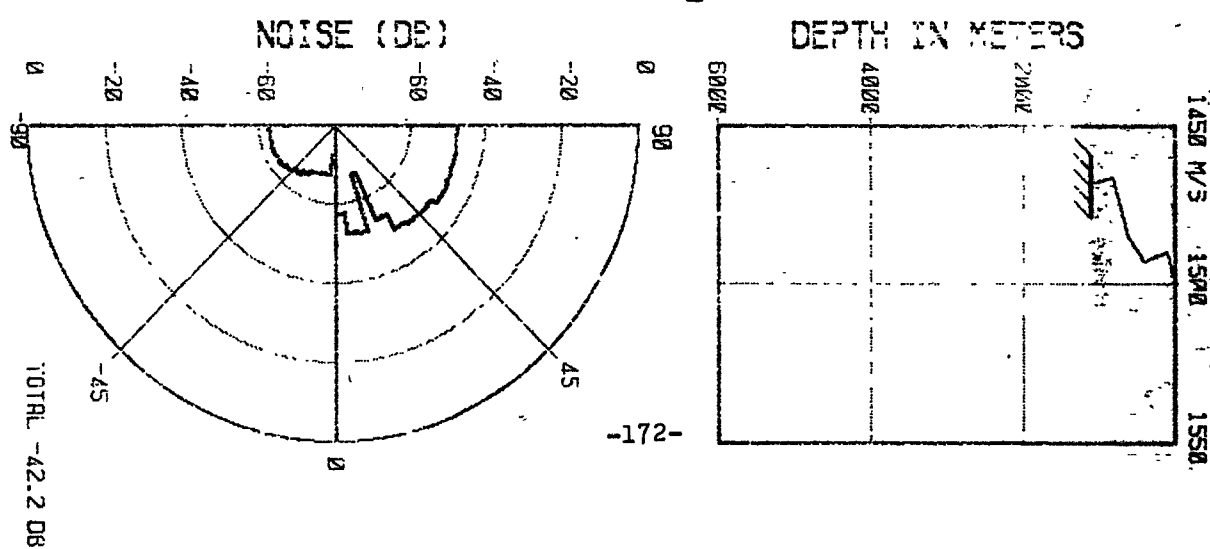
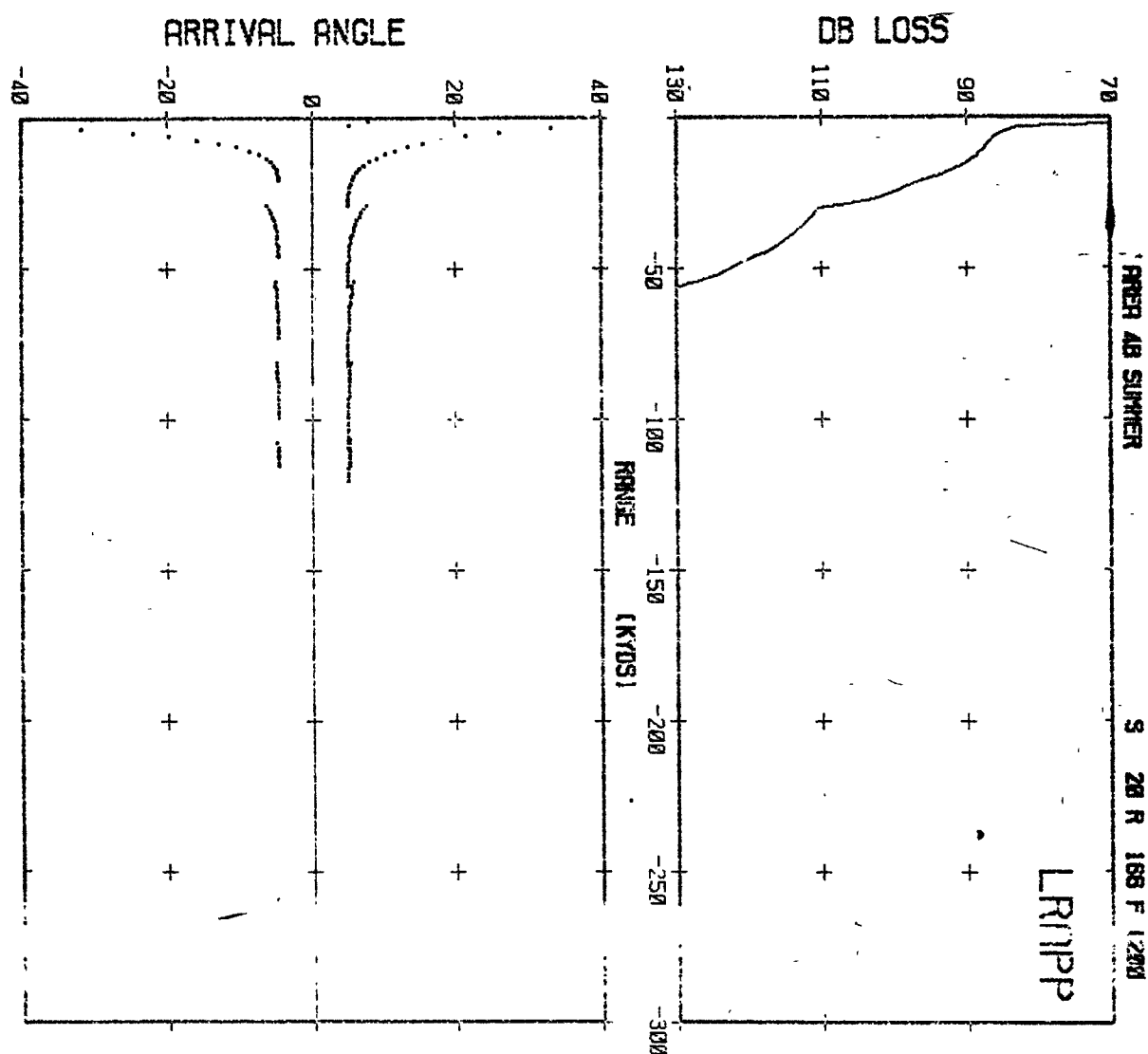
-167-

TOTAL -41.4 DB





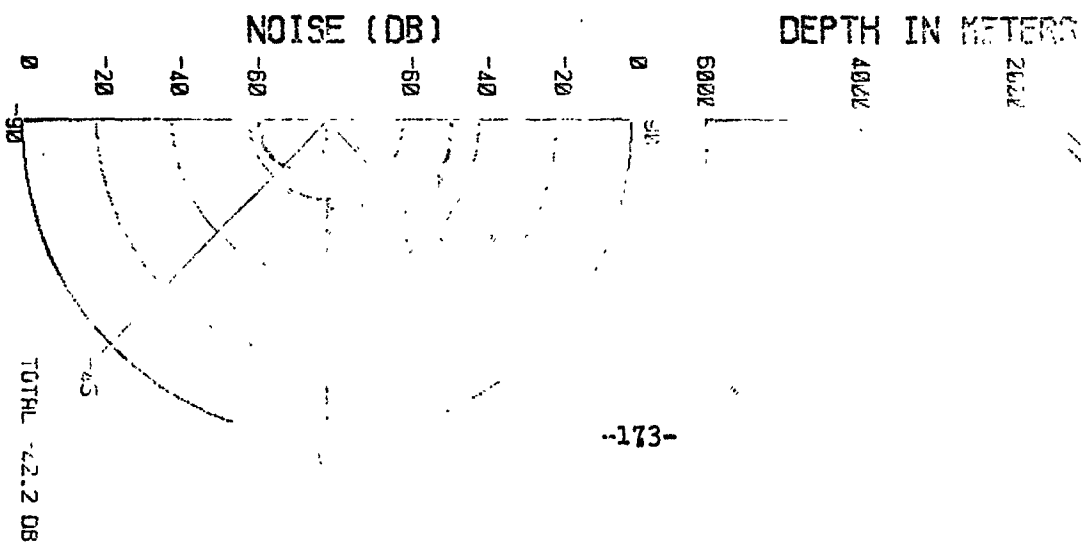
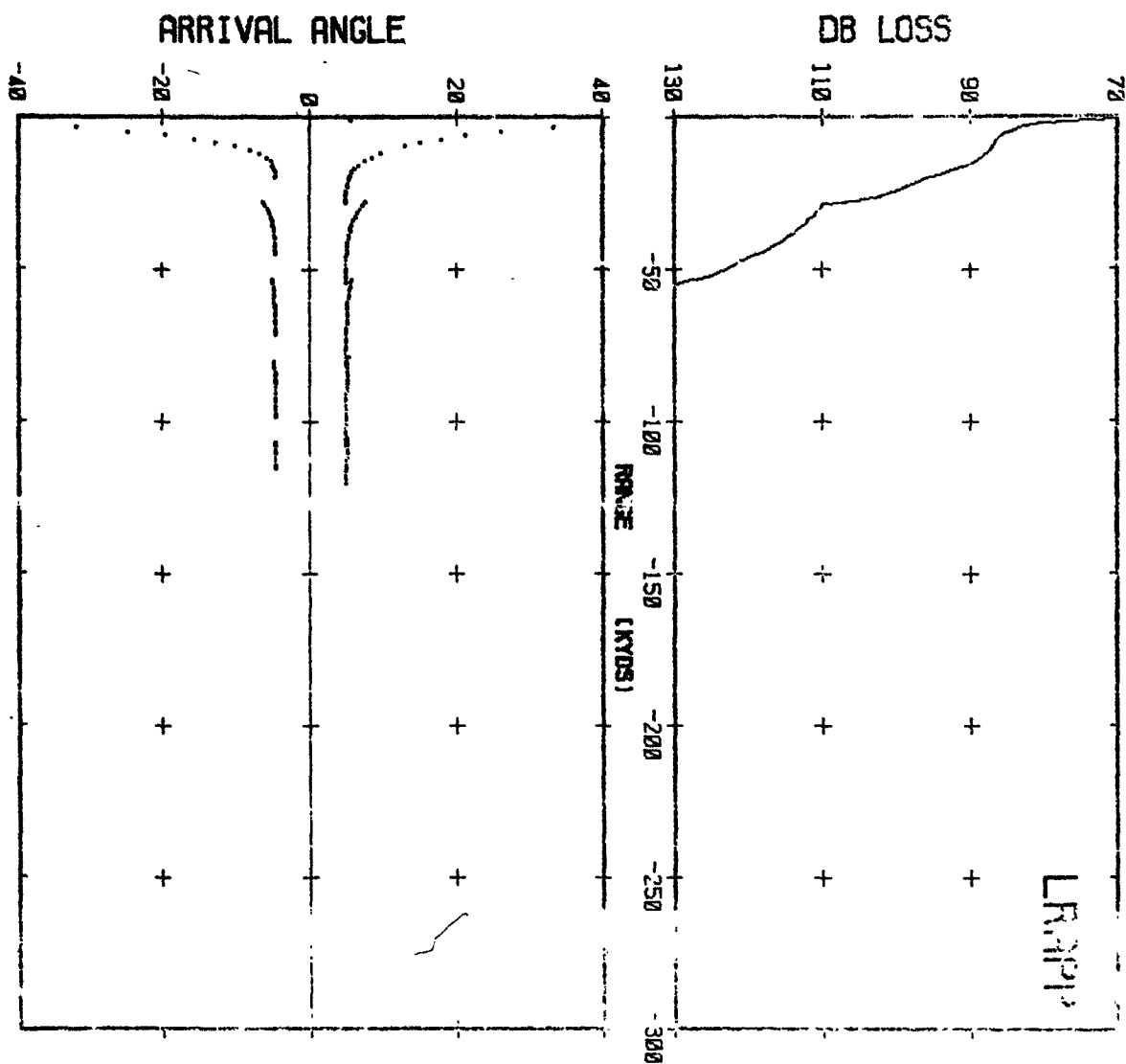


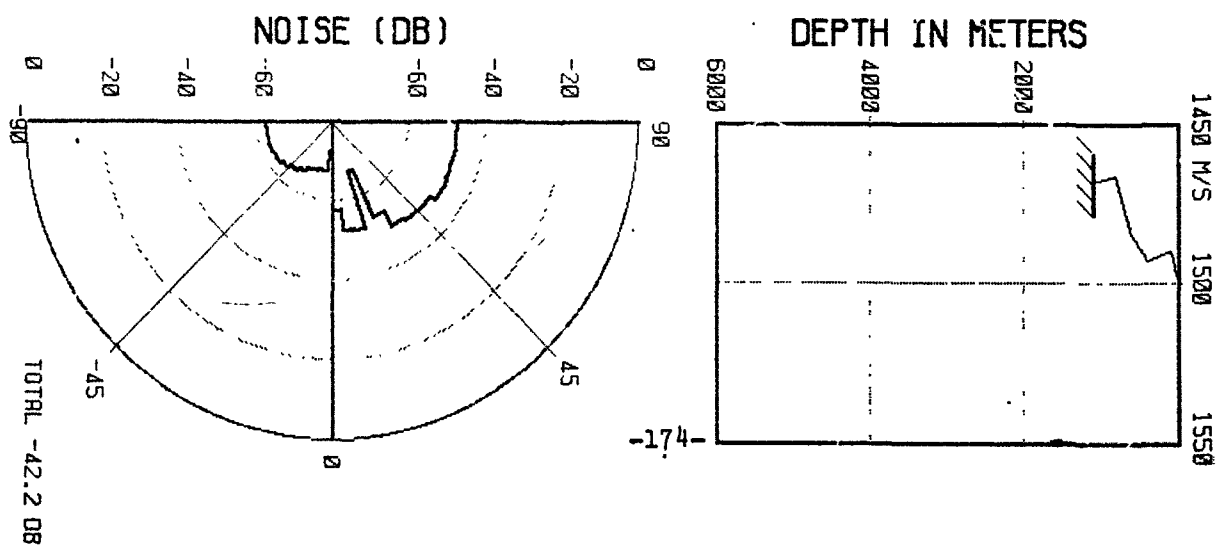
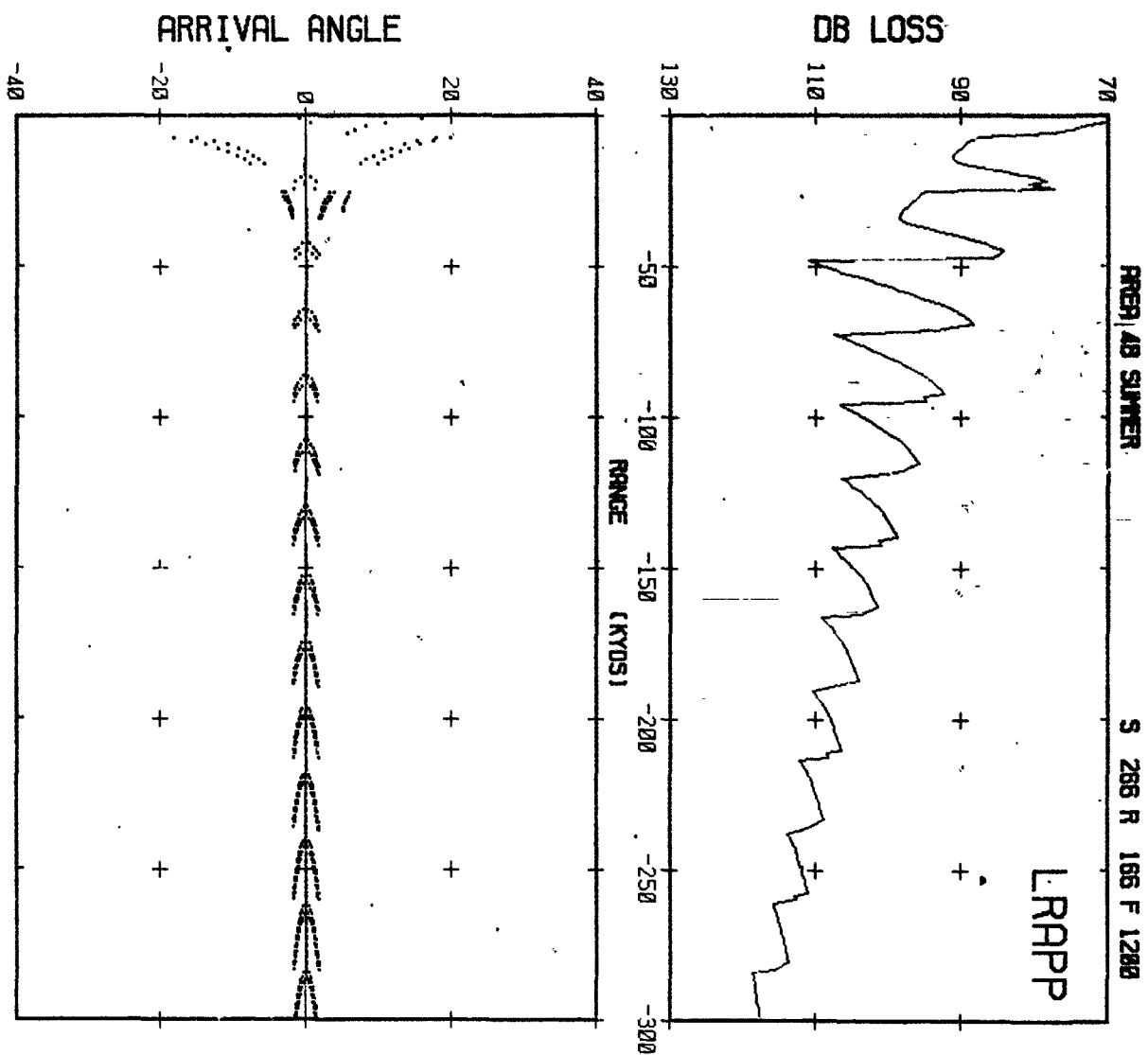


AREA 4B SUMMER

S 50 R 166 F 1234

14L





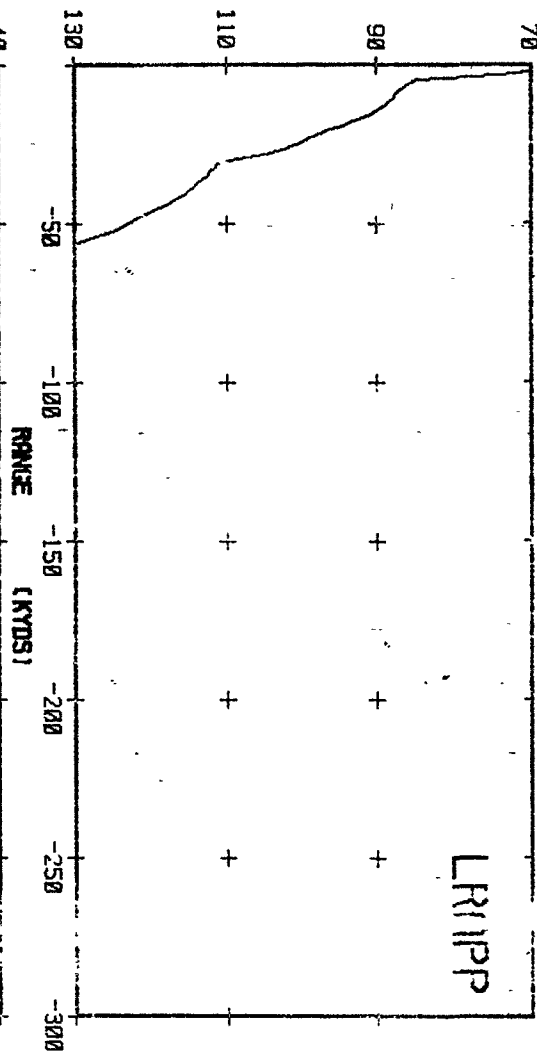
AREA 4B SUMMER

S 20 R 300 F 1200

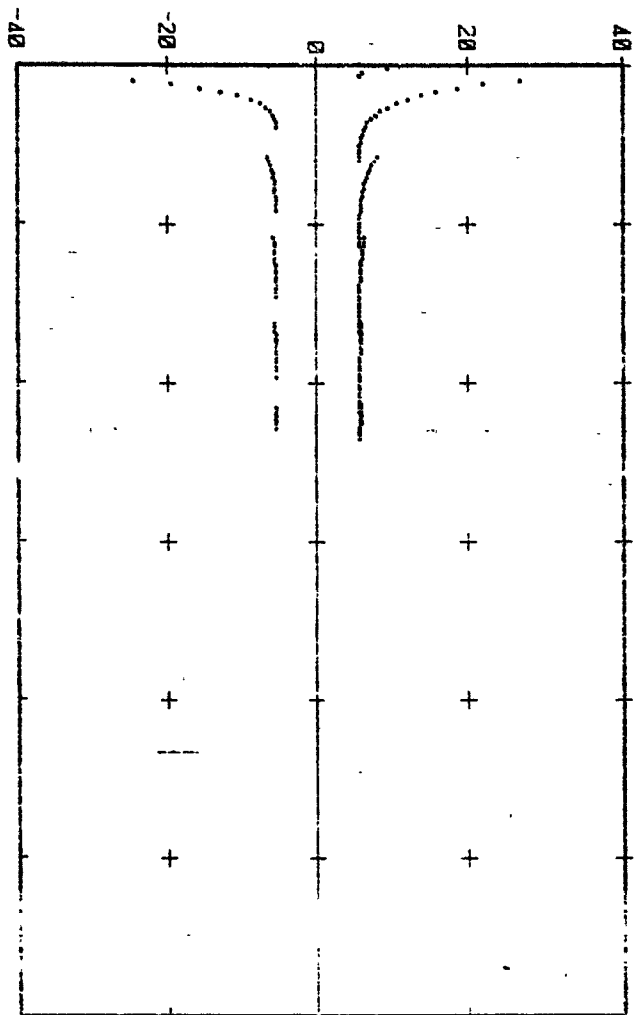
1450 M/S 1500

1550

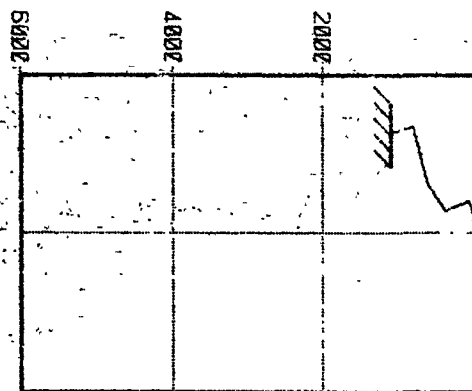
DB LOSS



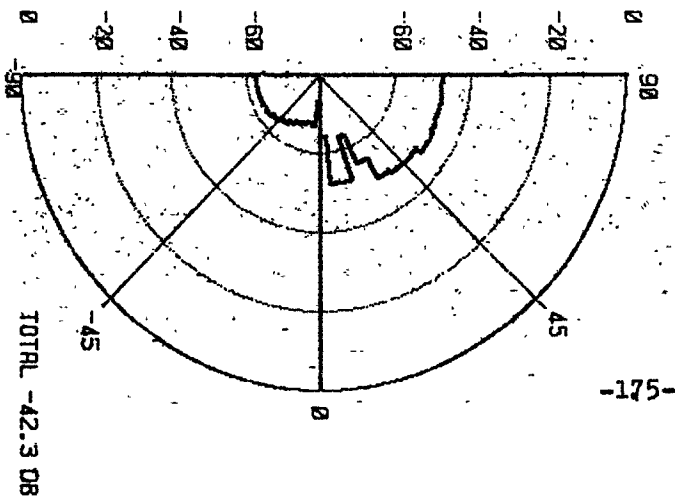
ARRIVAL ANGLE

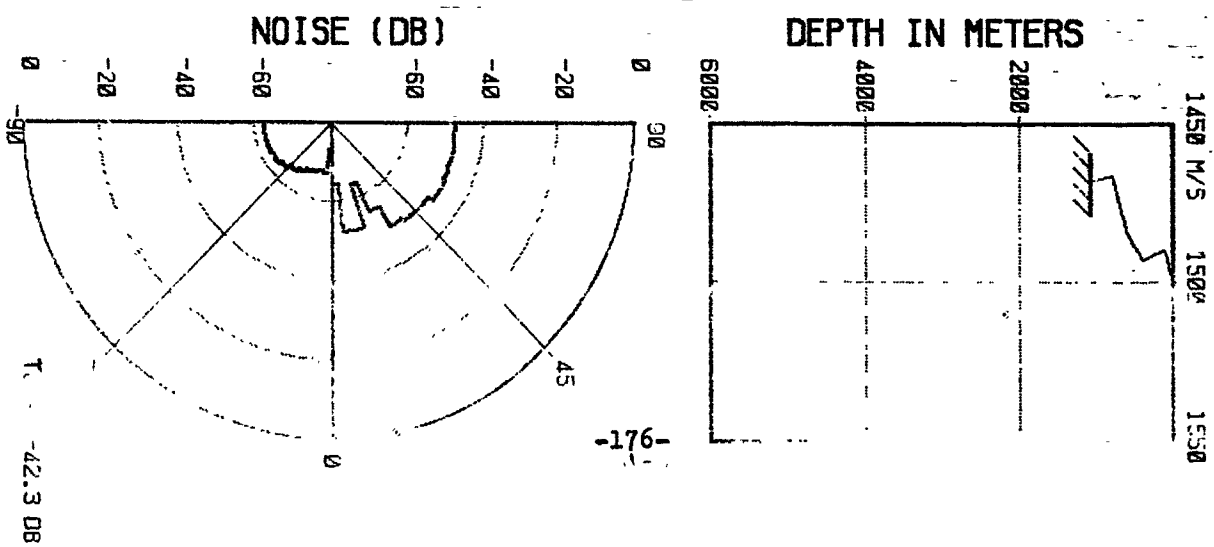
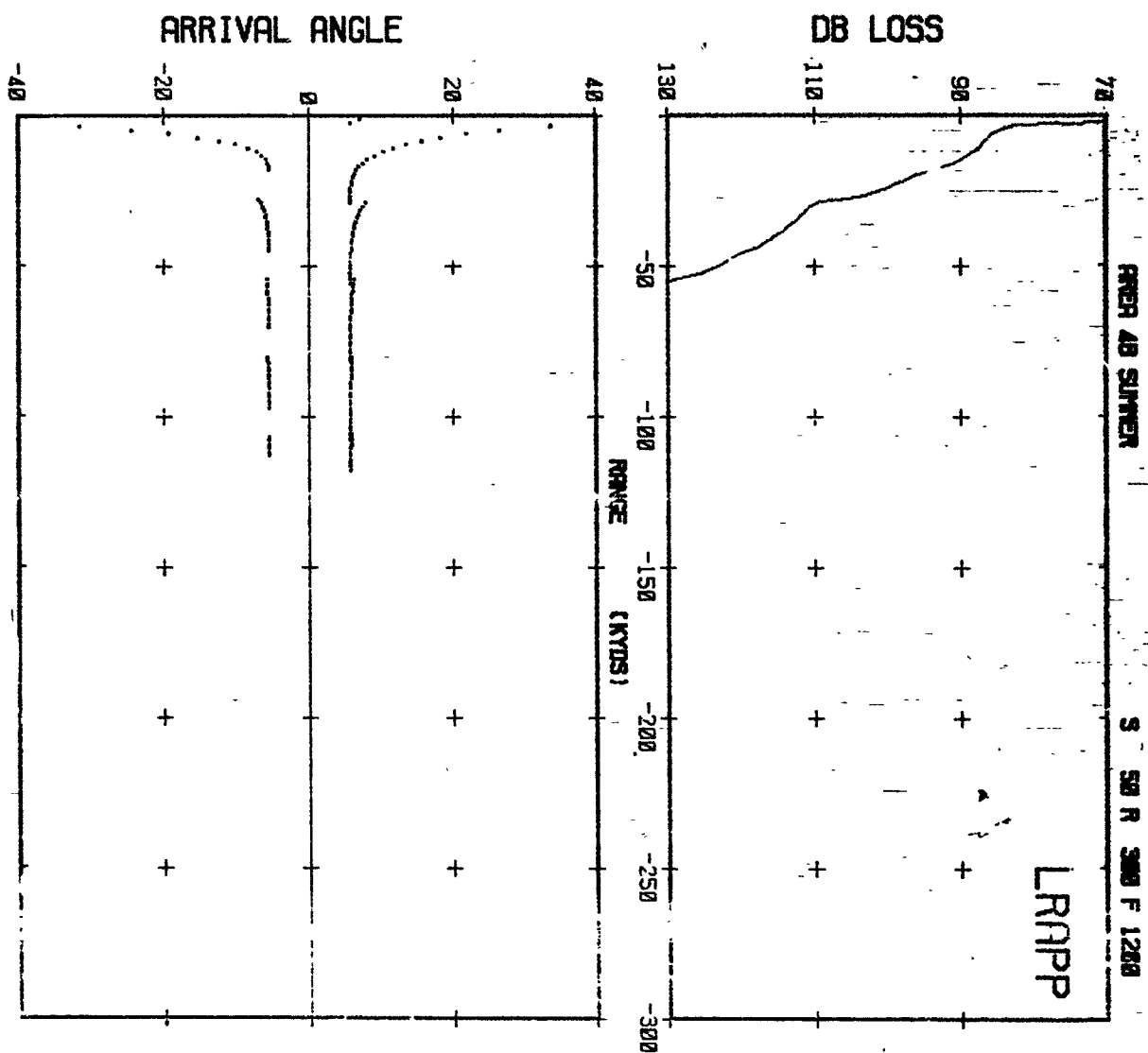


DEPTH IN METERS



NOISE (DB)



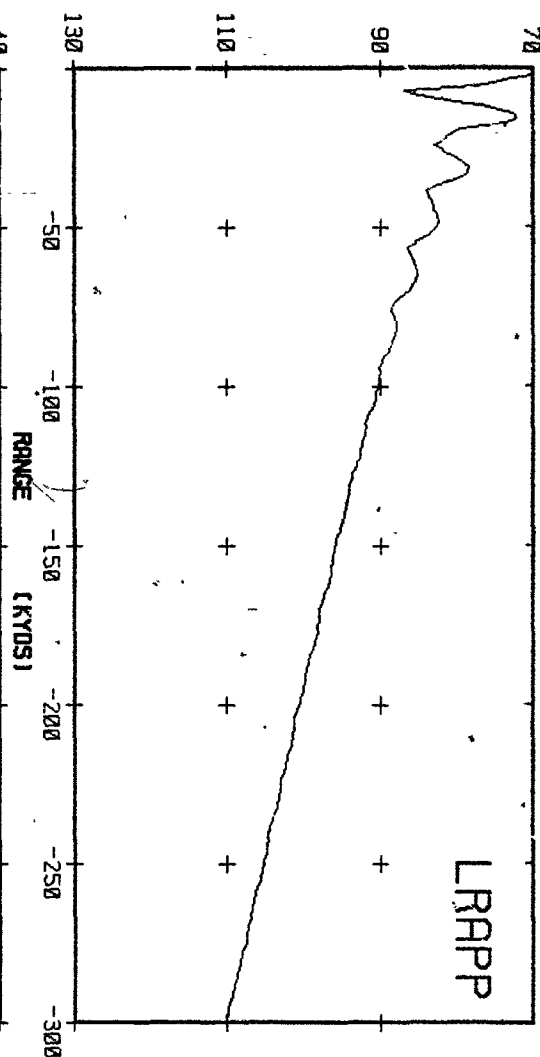


AREA 4B SUMMER

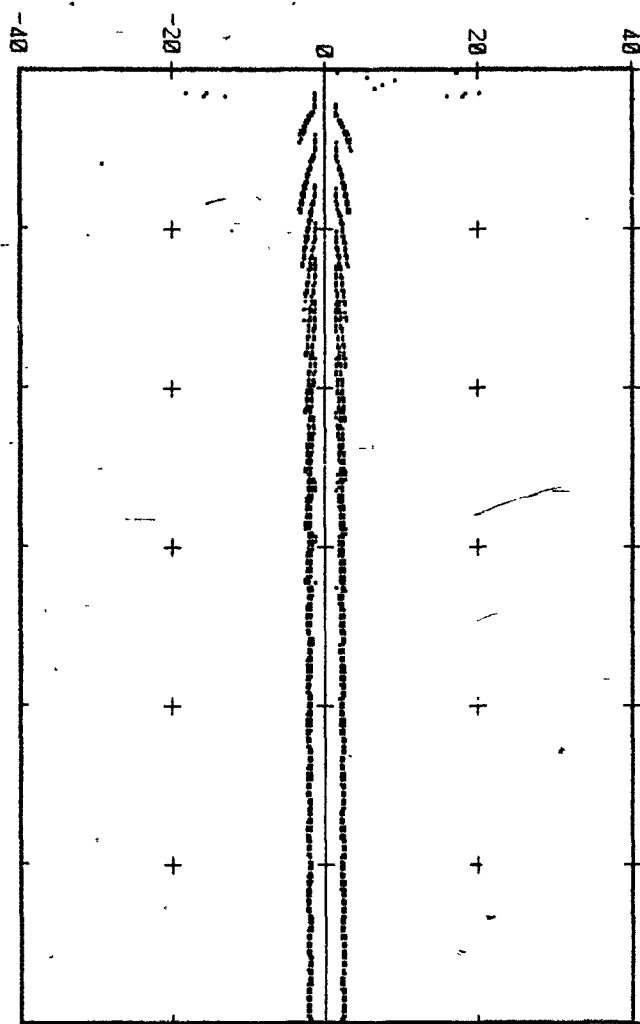
S 266 R 300 F 1200

1450 M/S 1520 1550

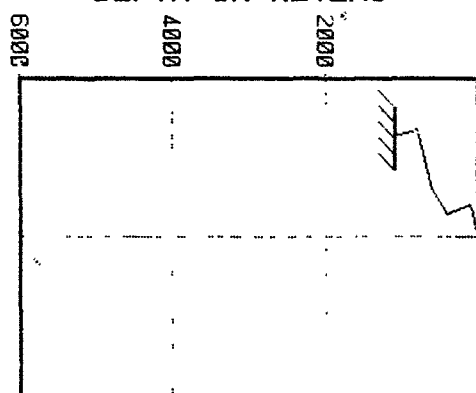
DB LOSS



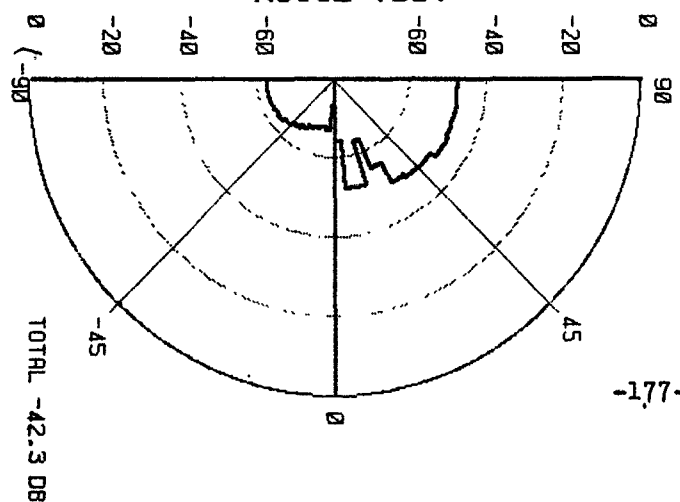
ARRIVAL ANGLE



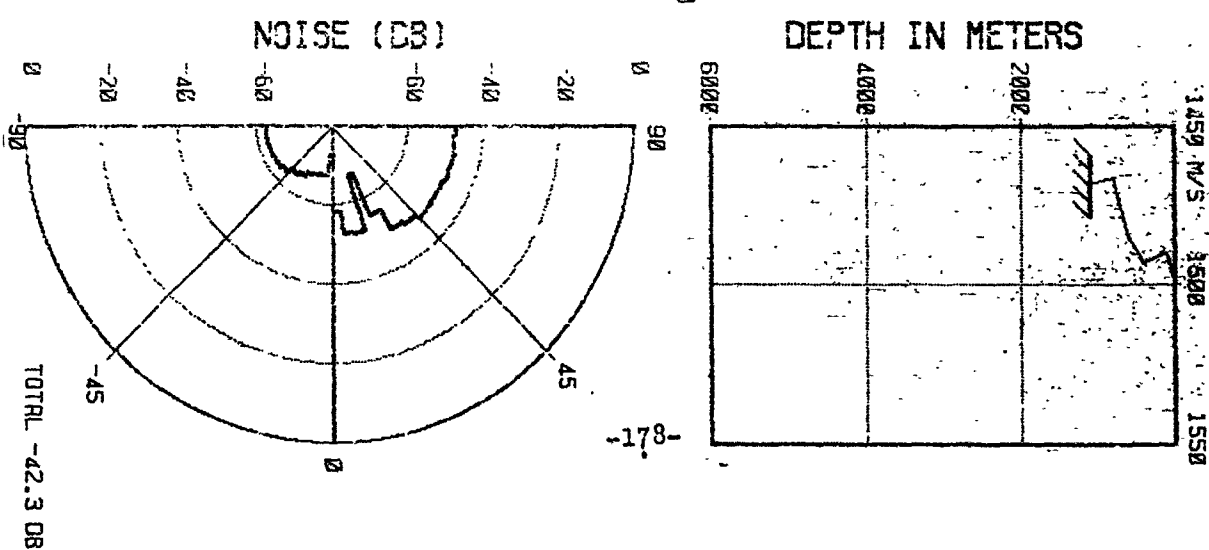
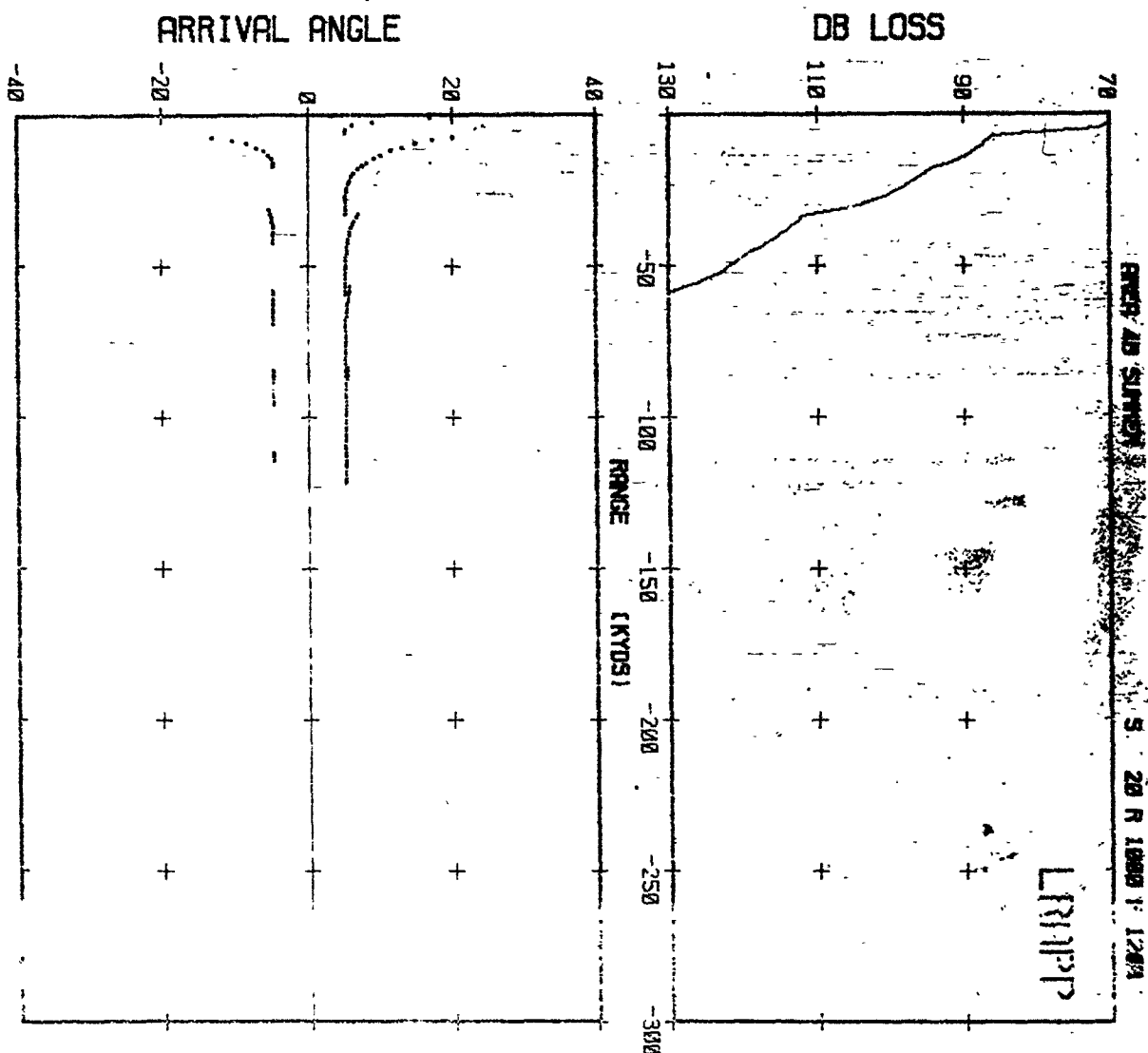
DEPTH IN METERS

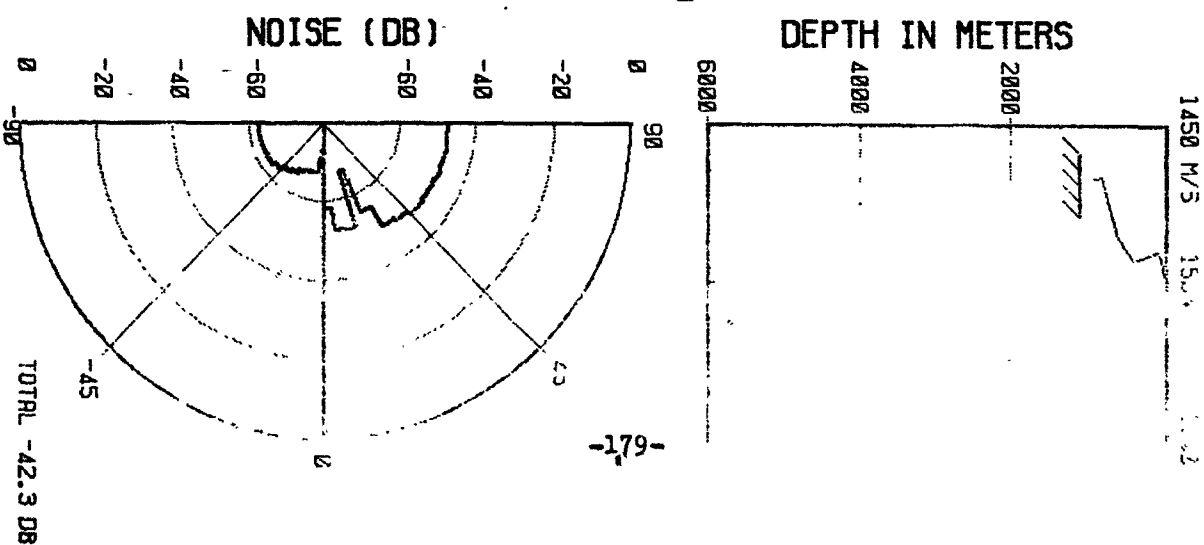
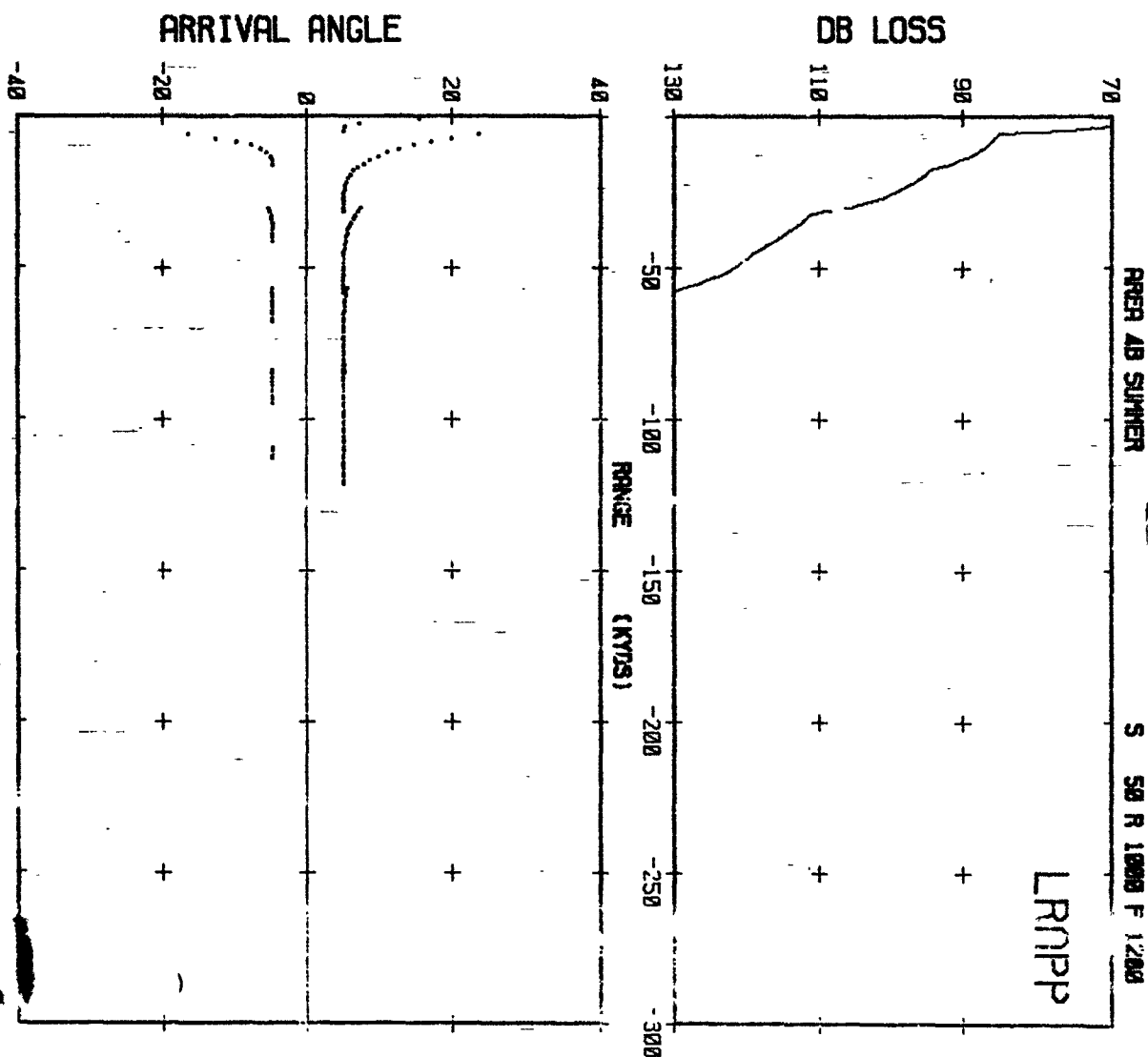


NOISE (DB)

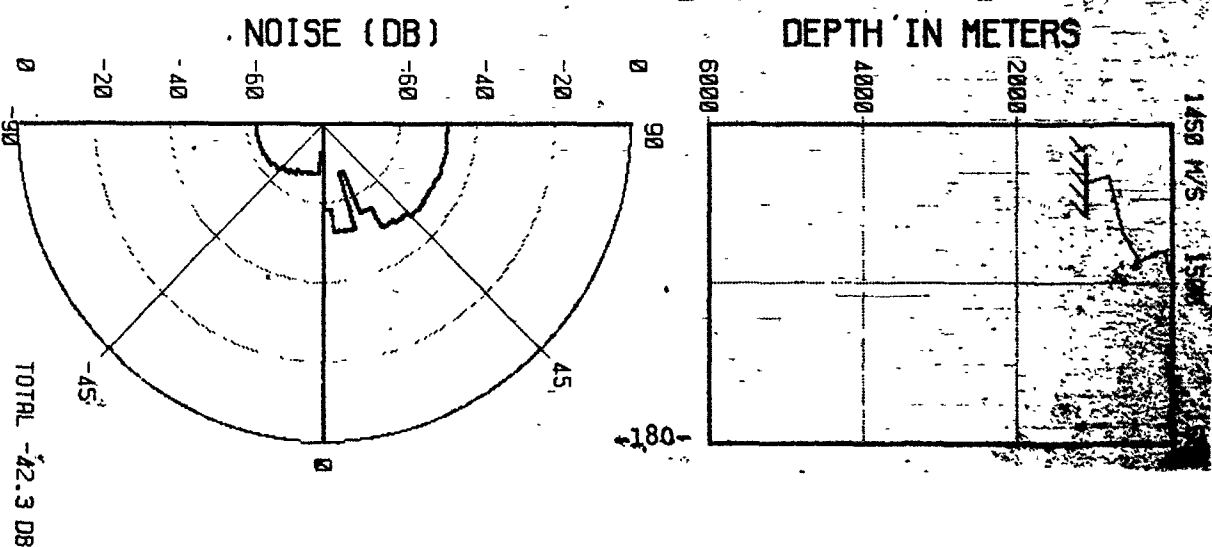
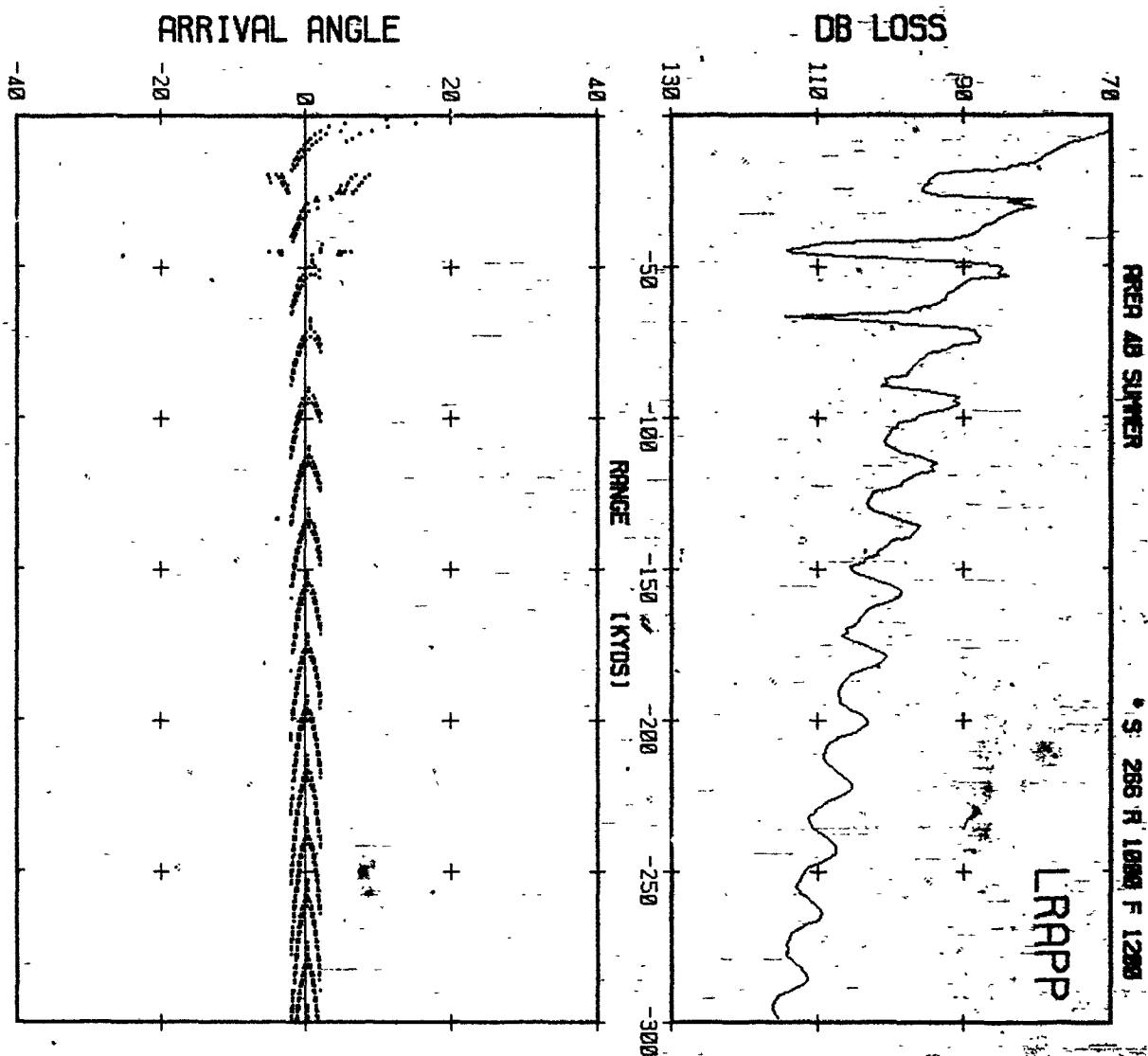


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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

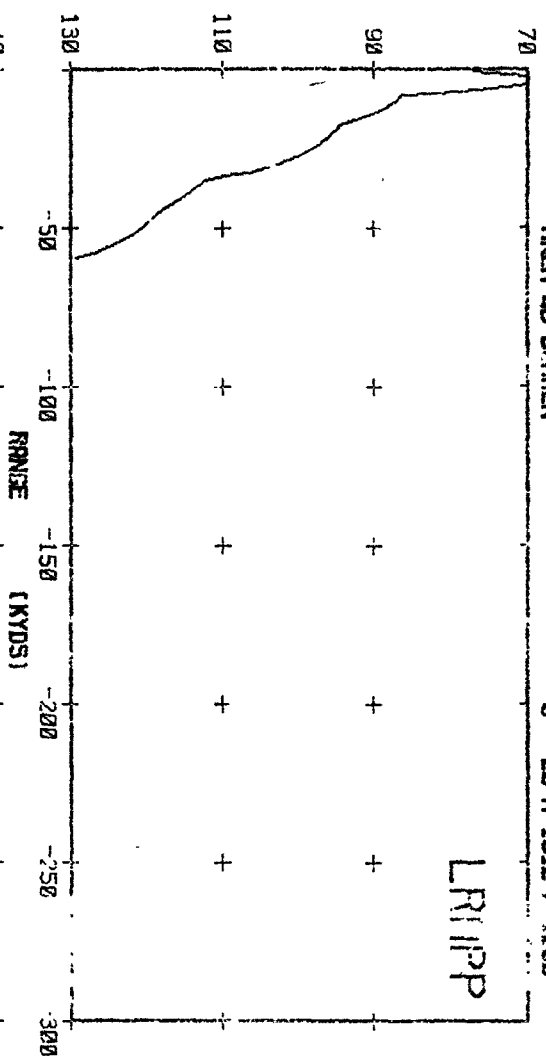


ARRA 4B SINKER

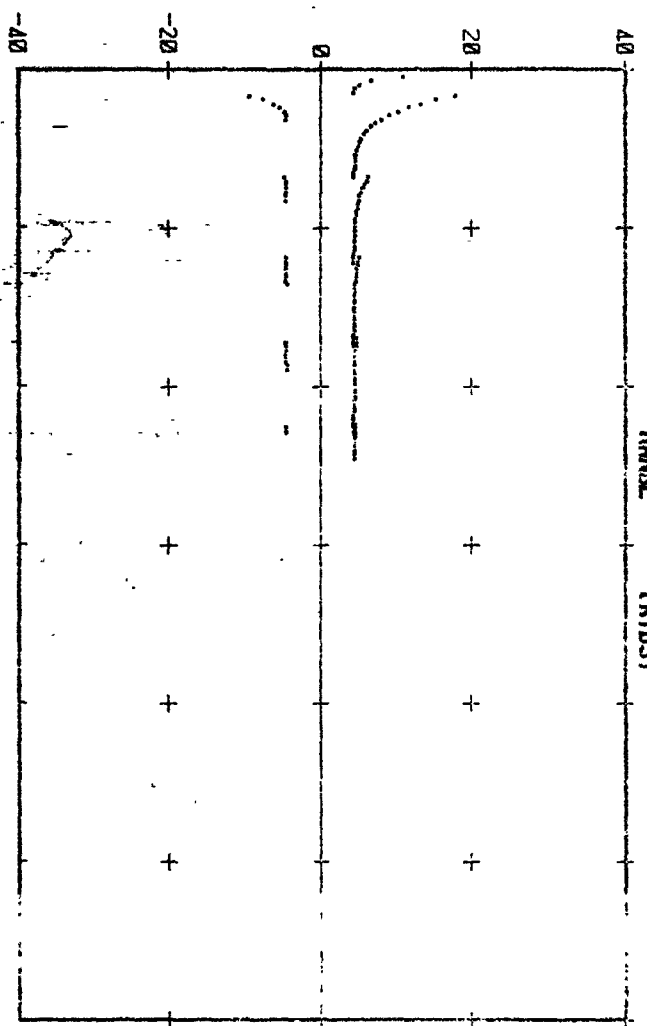
S 20 R 1312 F 1248

1450 M/S 1500 1550

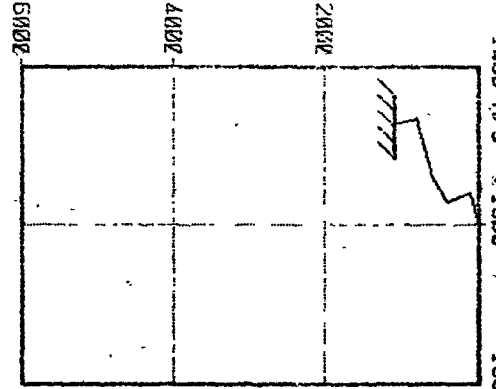
DB LOSS



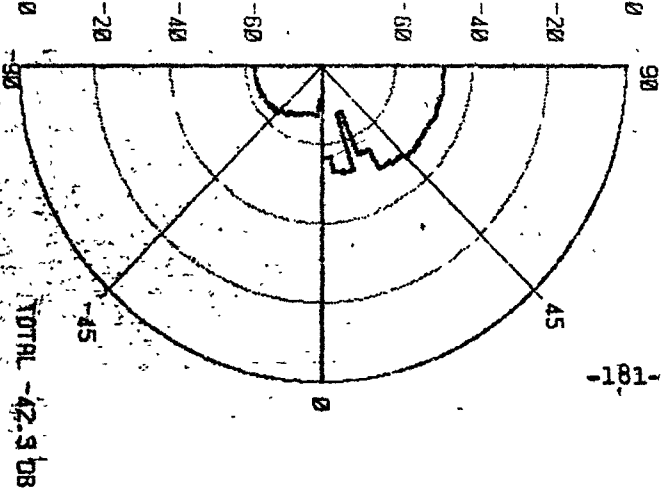
ARRIVAL ANGLE



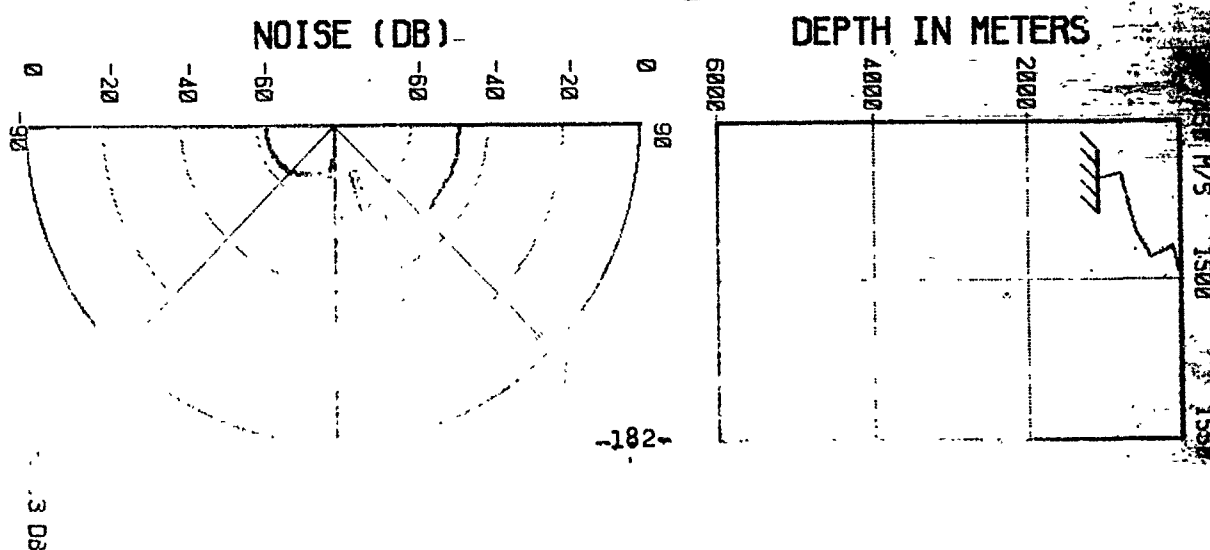
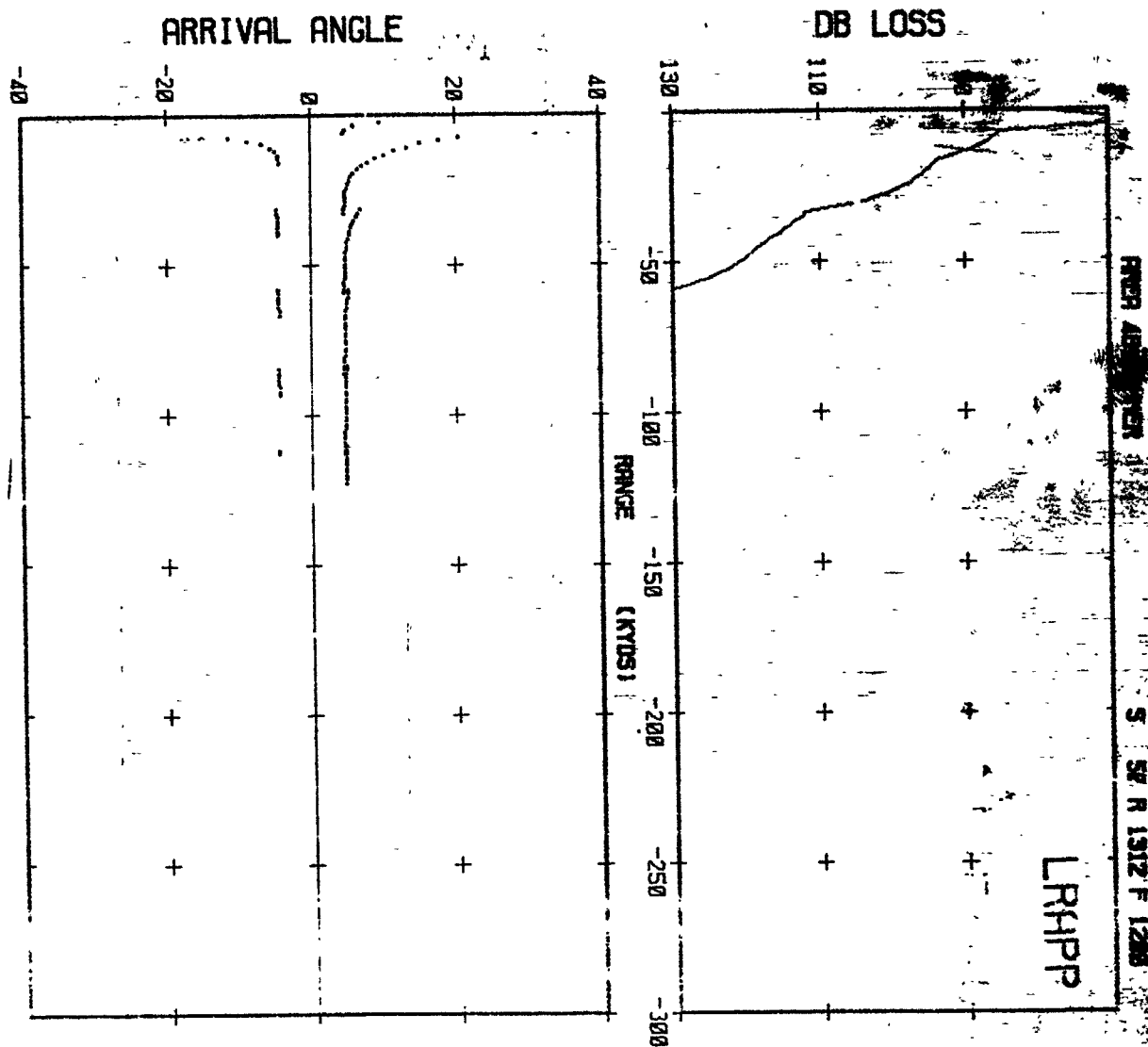
DEPTH IN METERS



NOISE (DB)



TOTAL -42.3 db

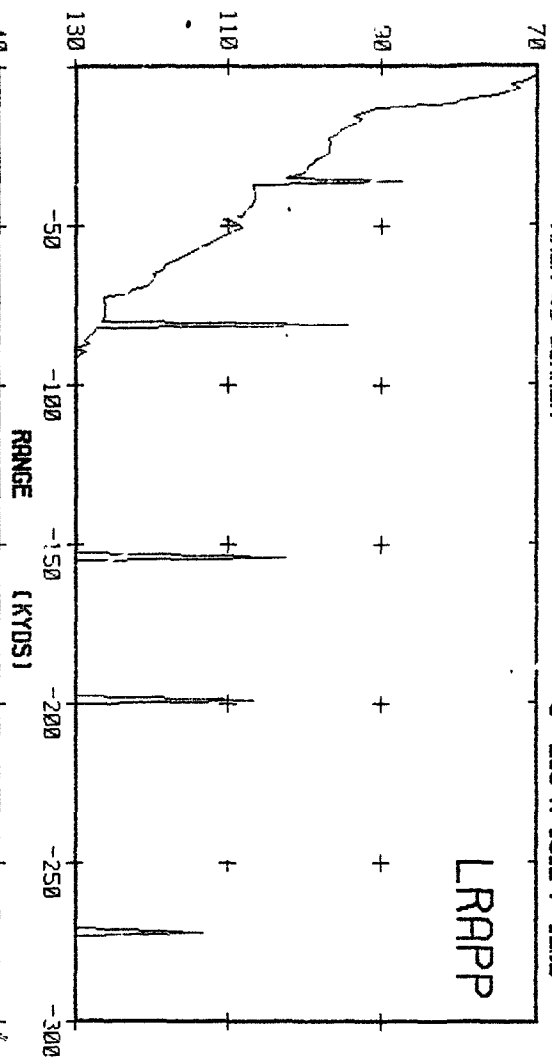


PRER AB SUMMER

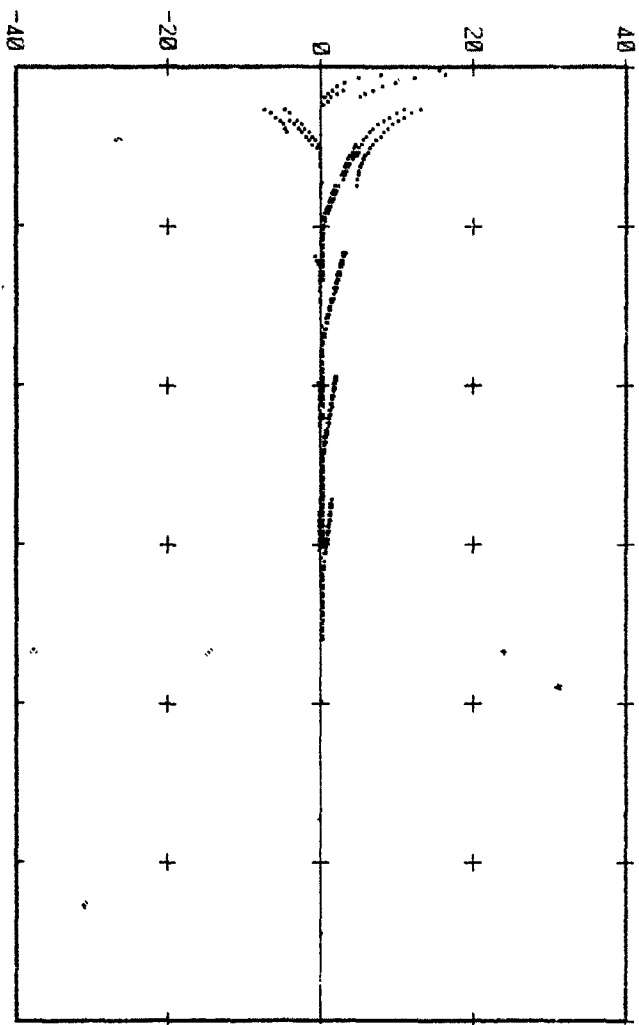
S 266 R 1312 F 1200

LRAPP

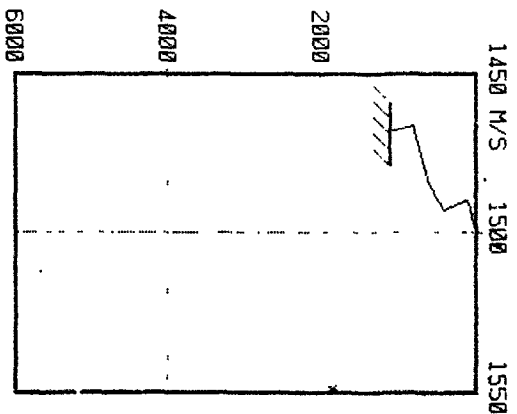
DB LOSS



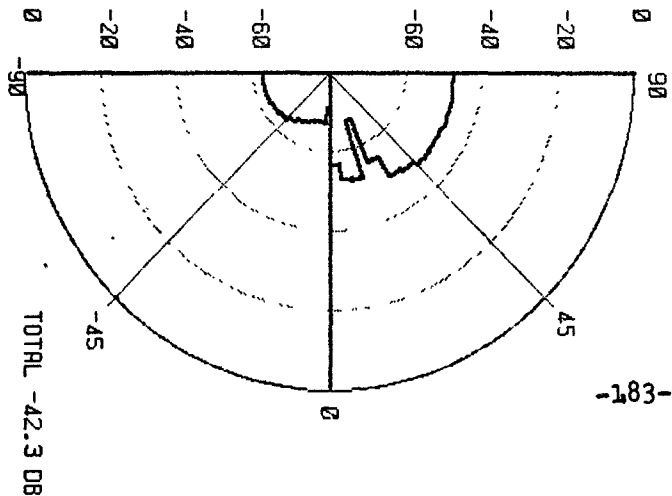
ARRIVAL ANGLE



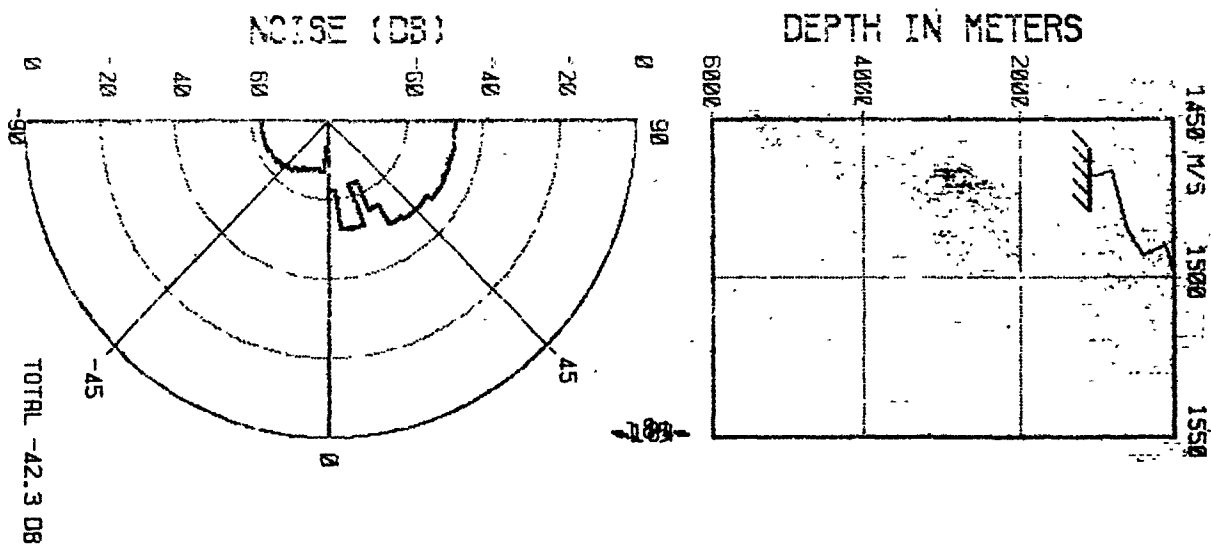
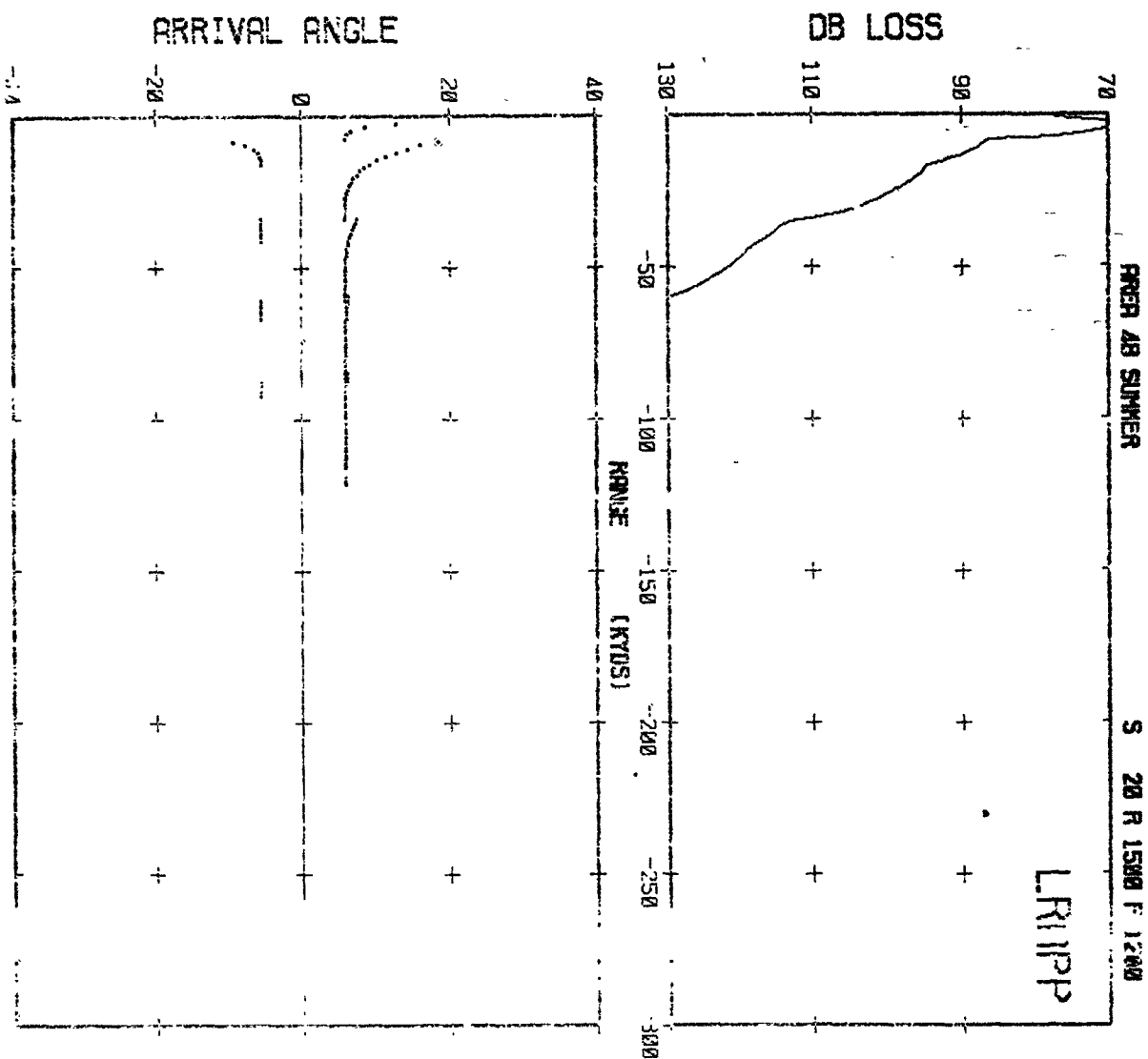
DEPTH IN METERS



NOISE (DB)



TOTAL -42.3 DB

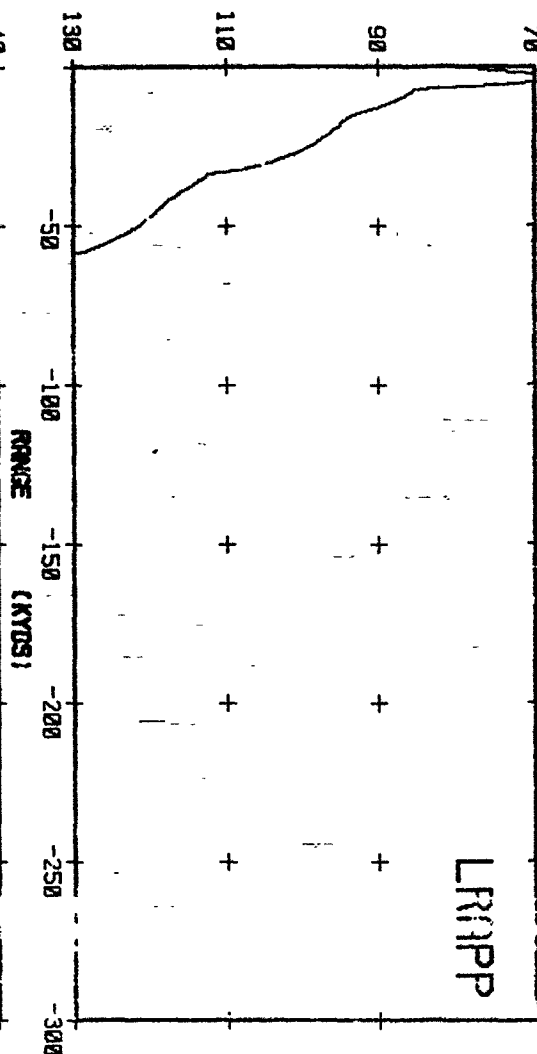


FRER AB SUMMER

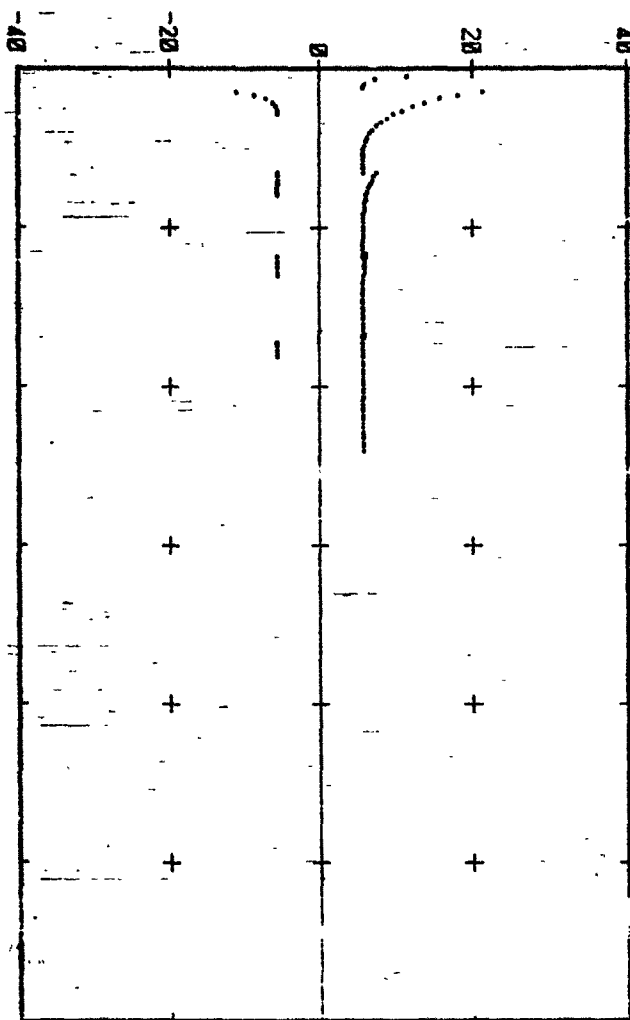
S SB R 1500 F 1200

1450 M/S

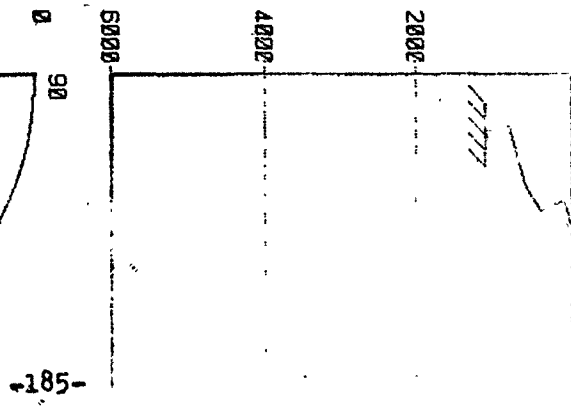
DB LOSS



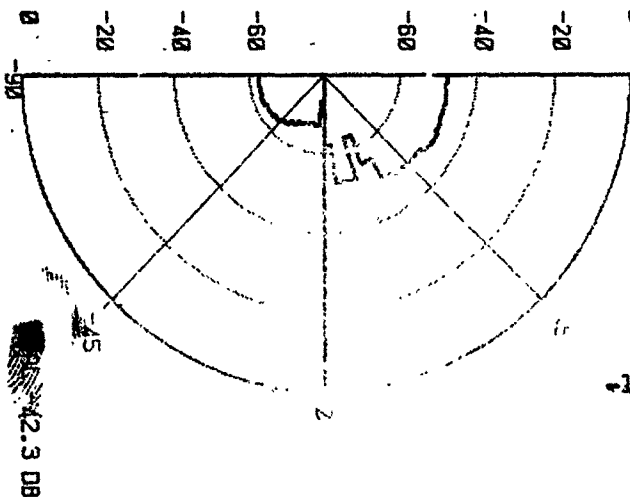
ARRIVAL ANGLE



DEPTH IN METERS



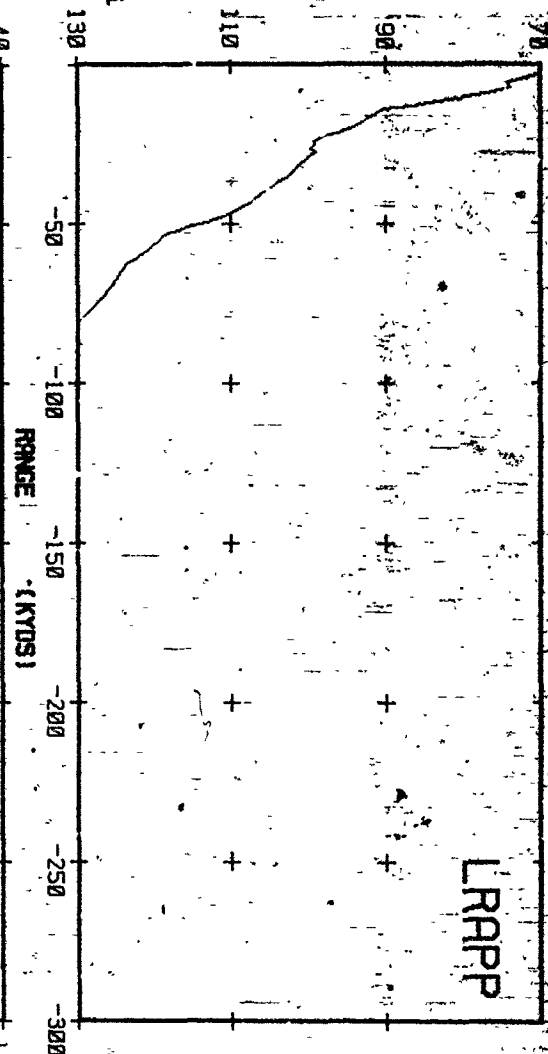
NOISE (DB)



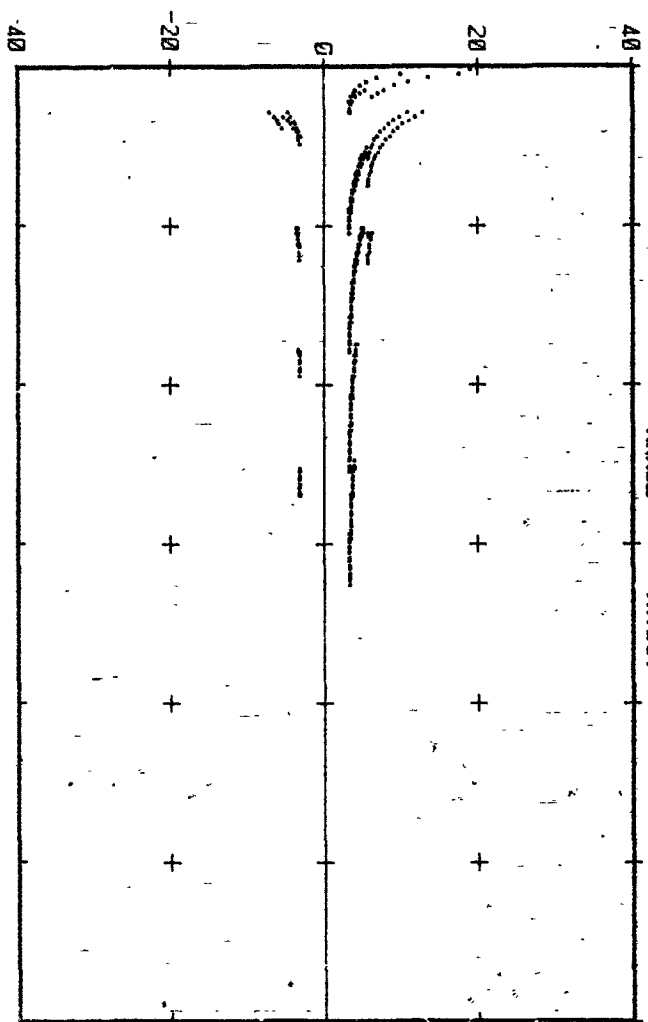
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OVER 40 SUMMER S 200 IN 1500 F 1200 1450 W/S 1500 1550

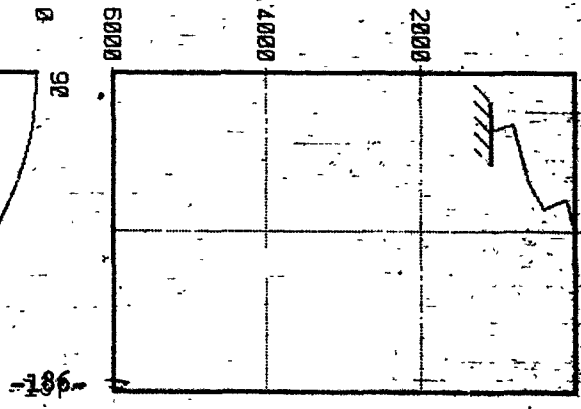
DB LOSS



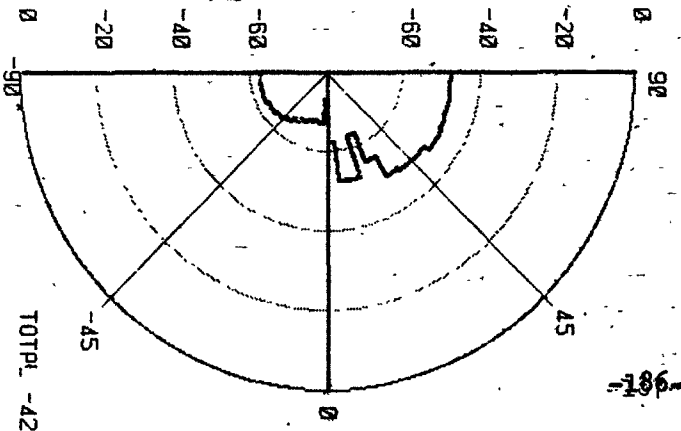
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



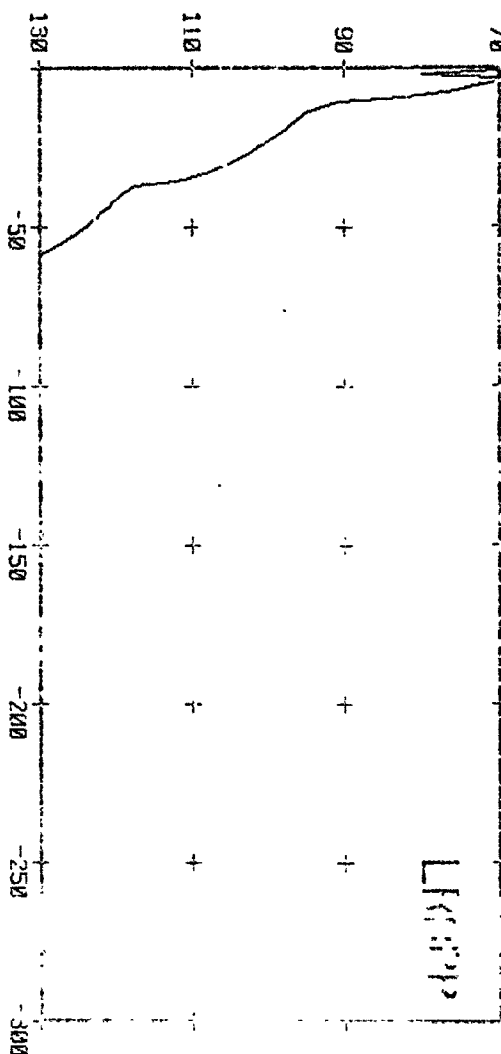
TOTPL -42.3 DB

FIREH AB SIGHTER

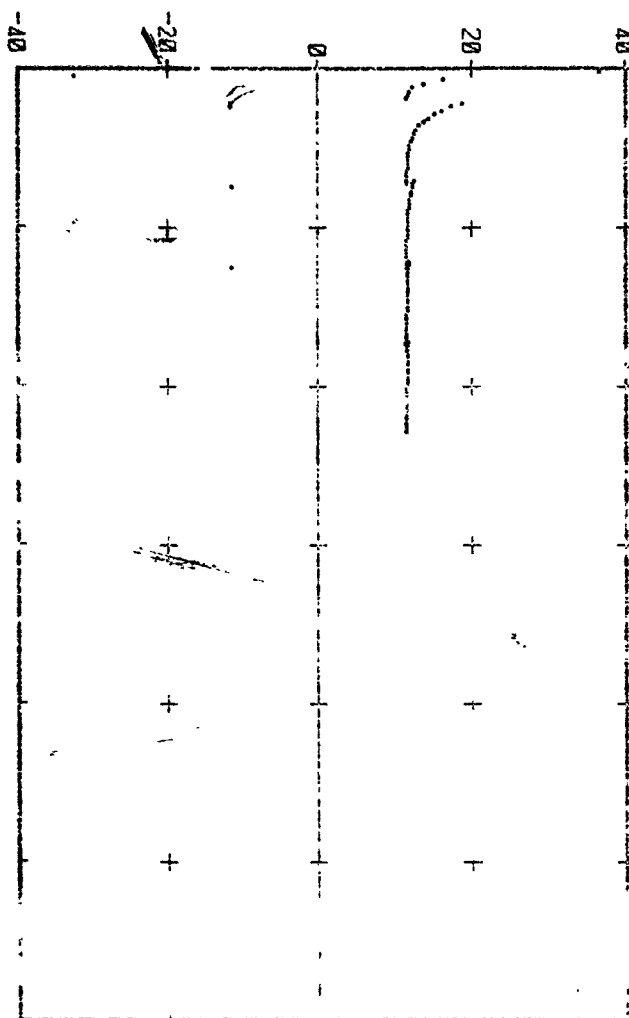
S 20 R 2625 F 1.1M

1450 H/S 1520 1550

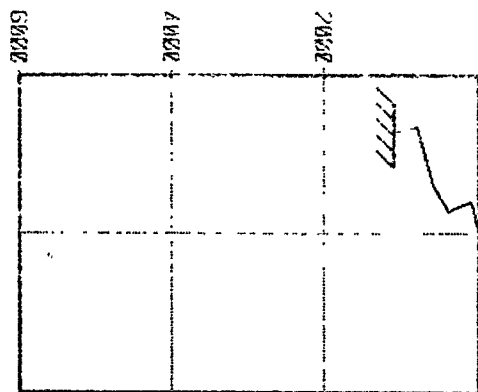
DB LOSS



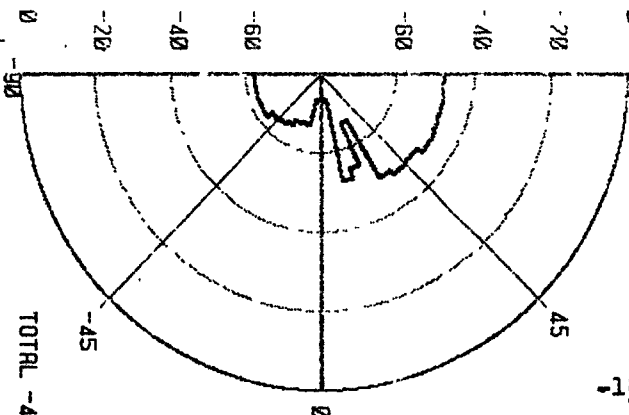
ARRIVAL ANGLE



RELATIVE ANGLE

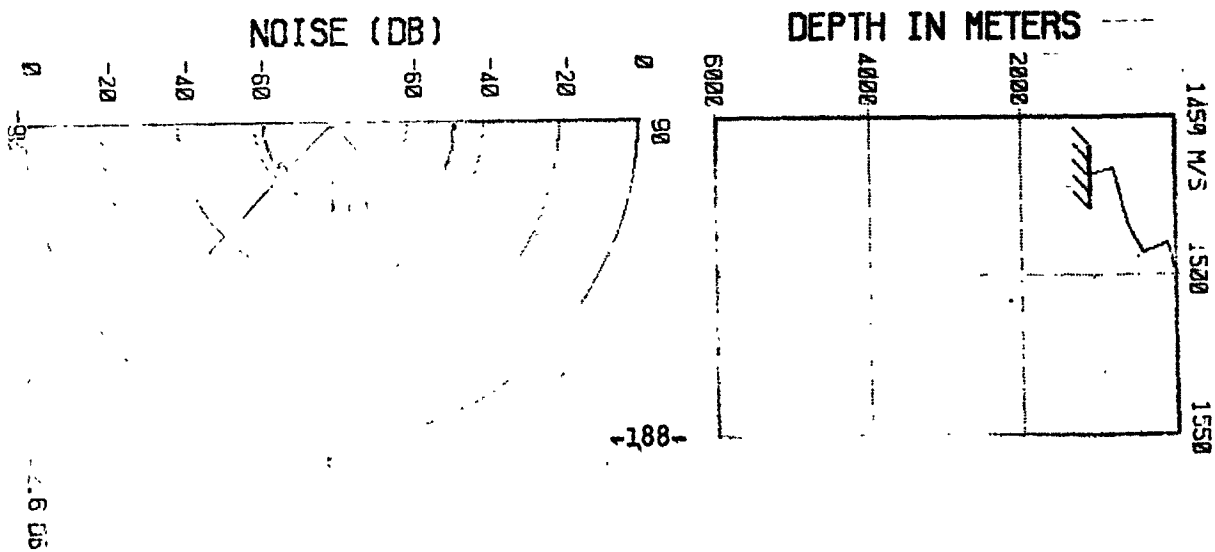
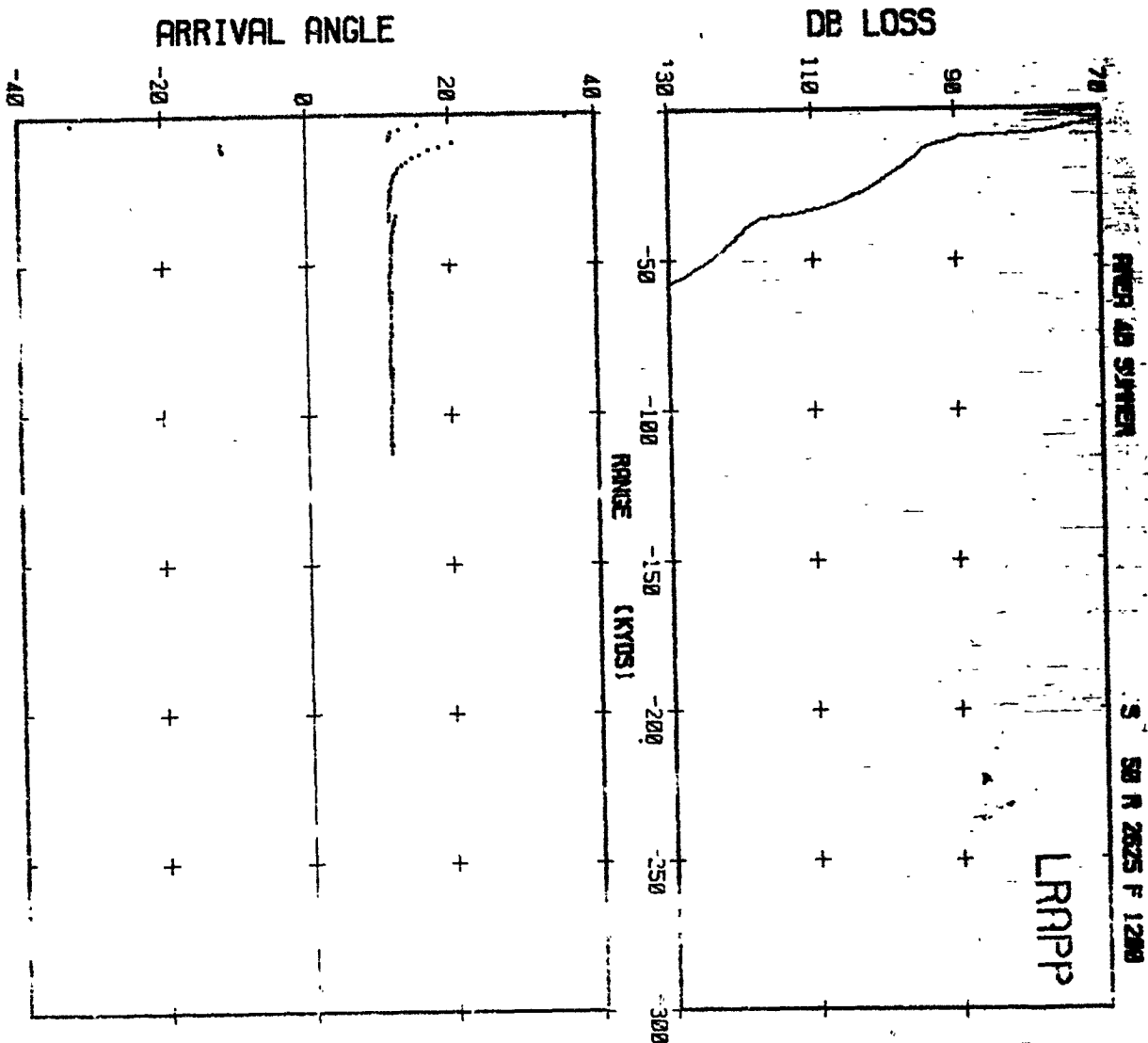


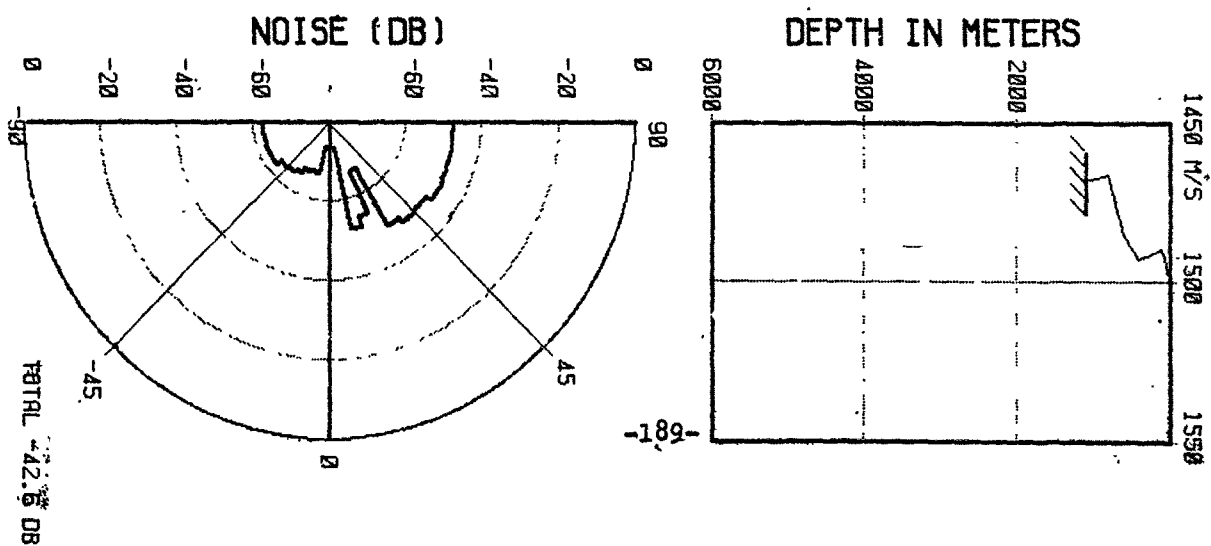
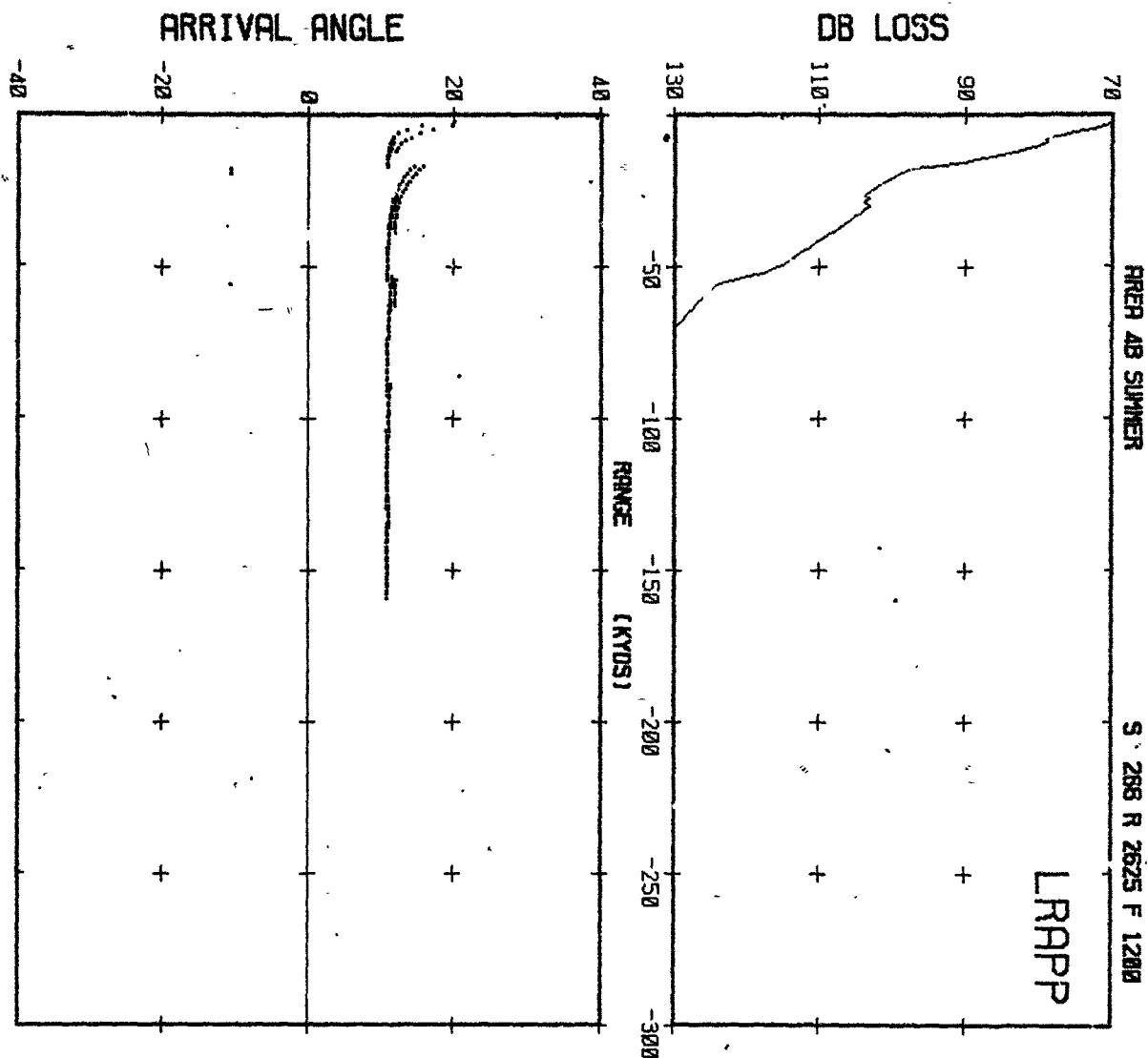
NOISE (DB)

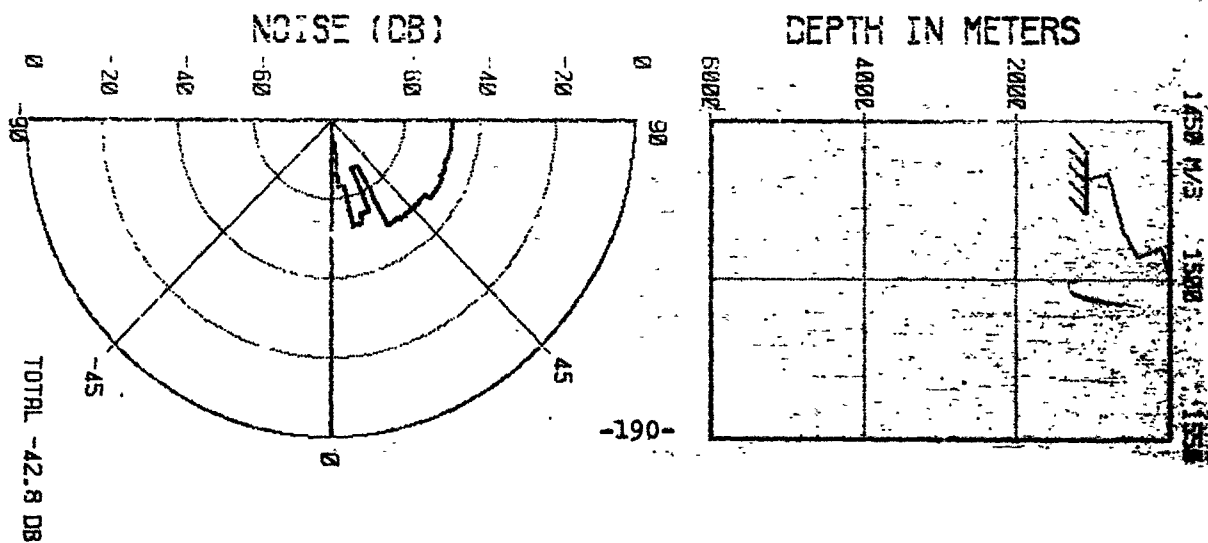
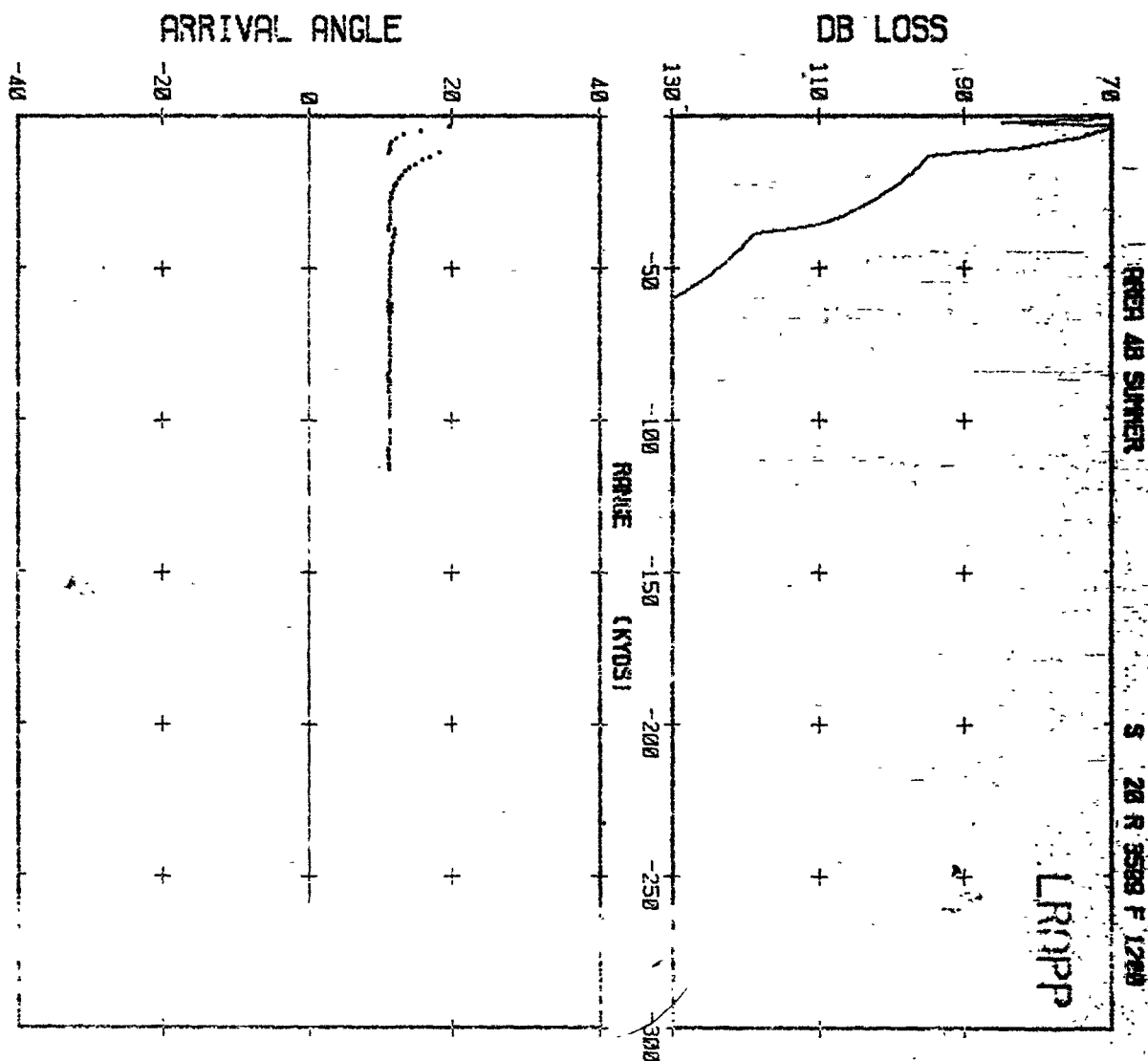


TOTAL -42.6 DB

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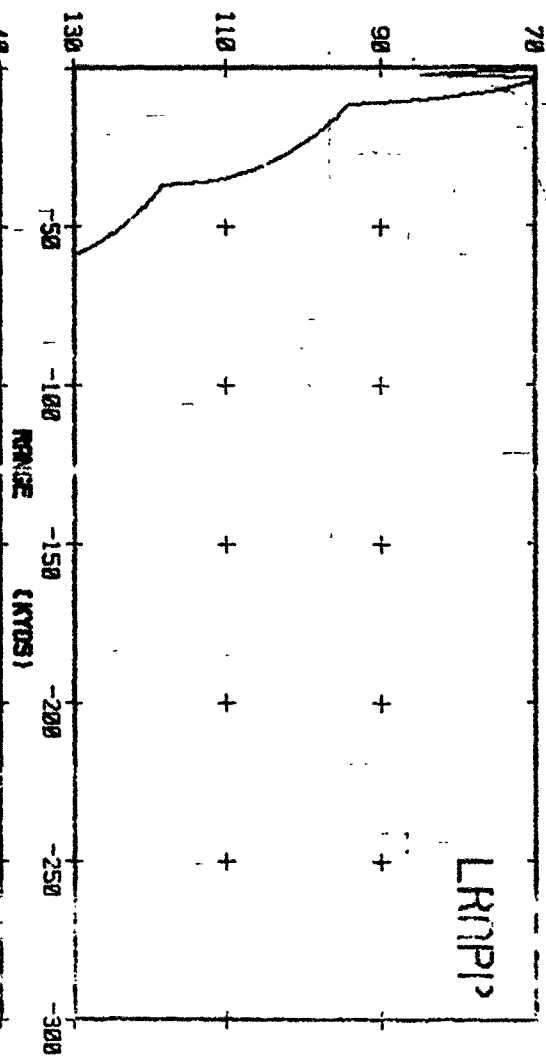


AREA 40 SUMMER

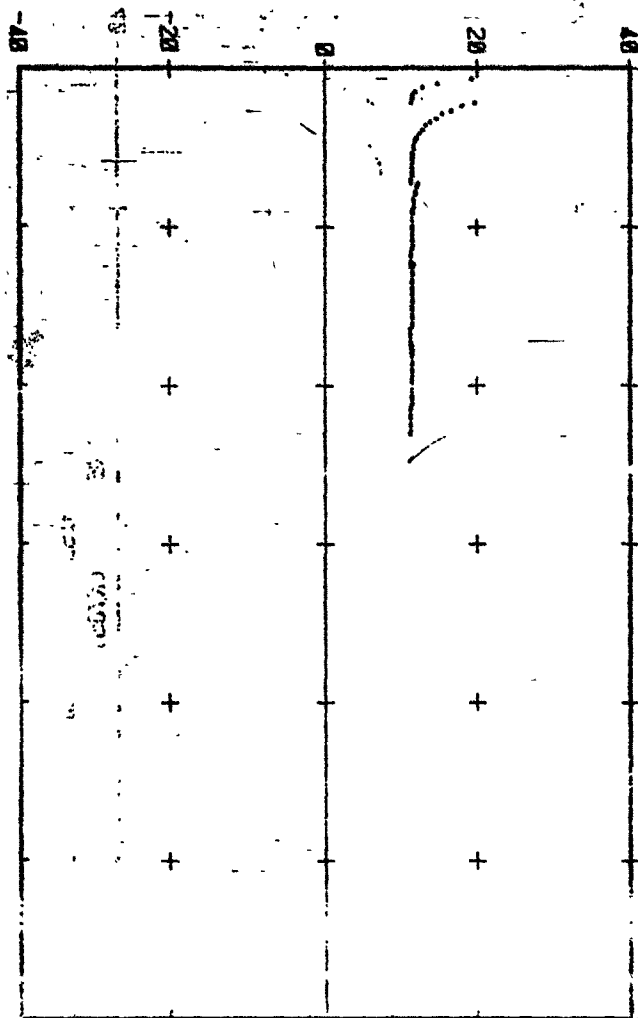
S 50 R 3598 F 1290

LRNPI

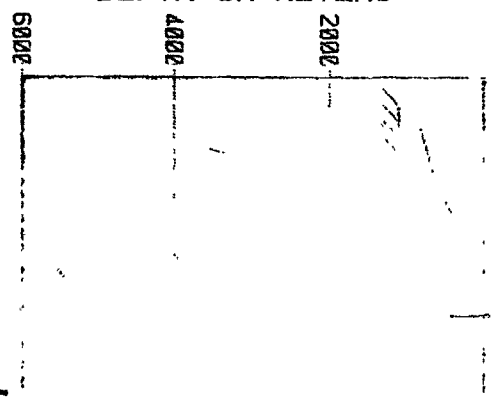
DB LOSS



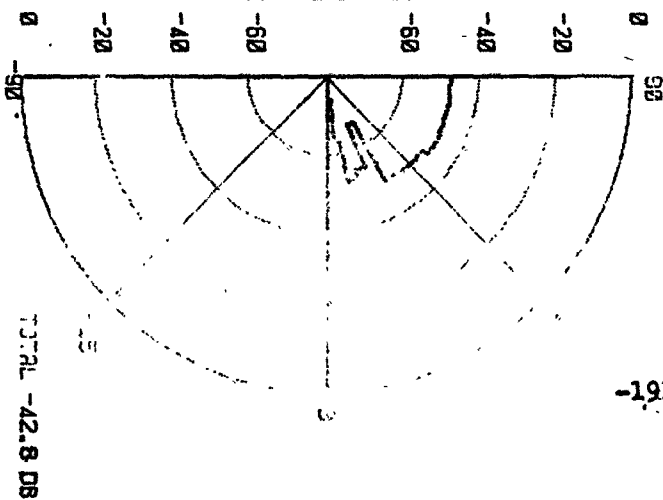
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



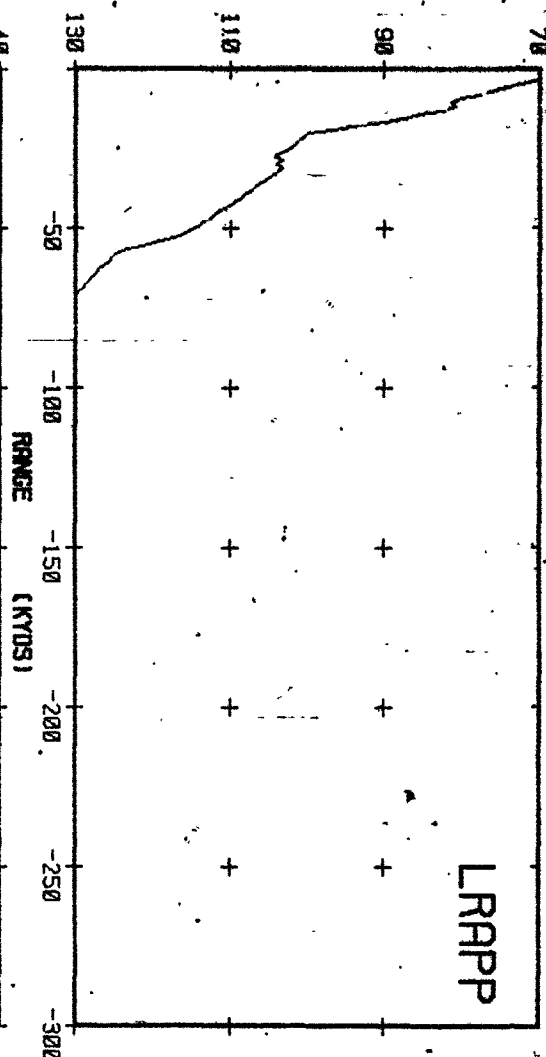
AREA 4B SUMMER

S 206 R 3599 F 1200

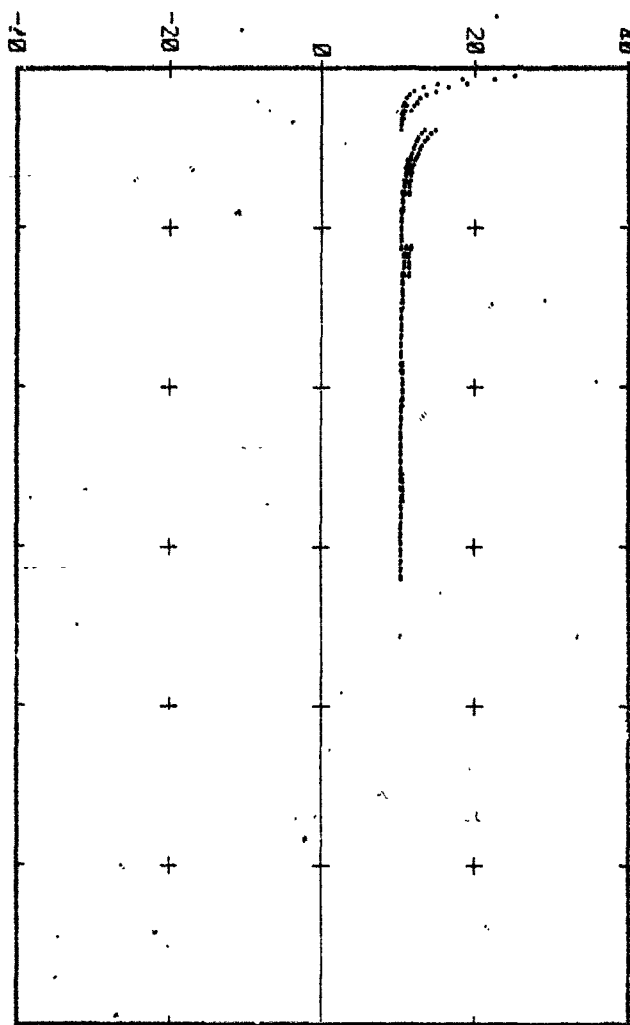
1450 M/S 1500

1550

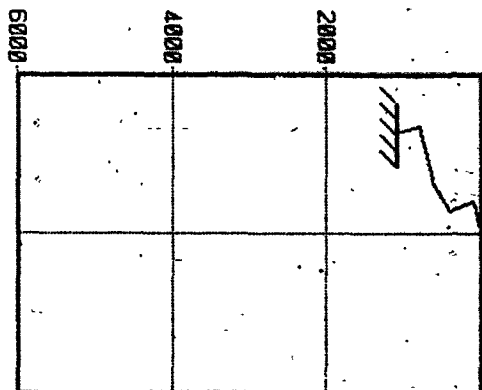
DB LOSS



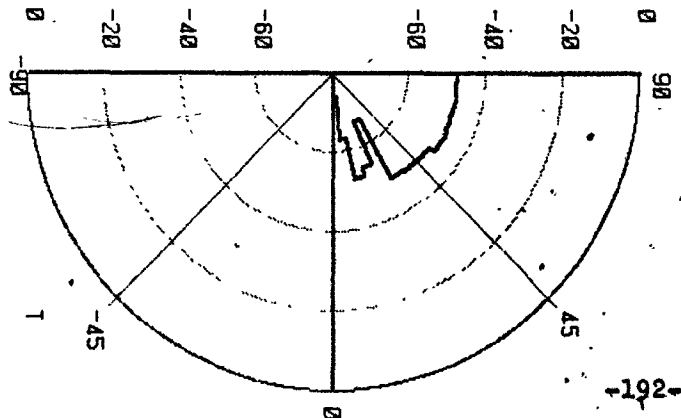
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

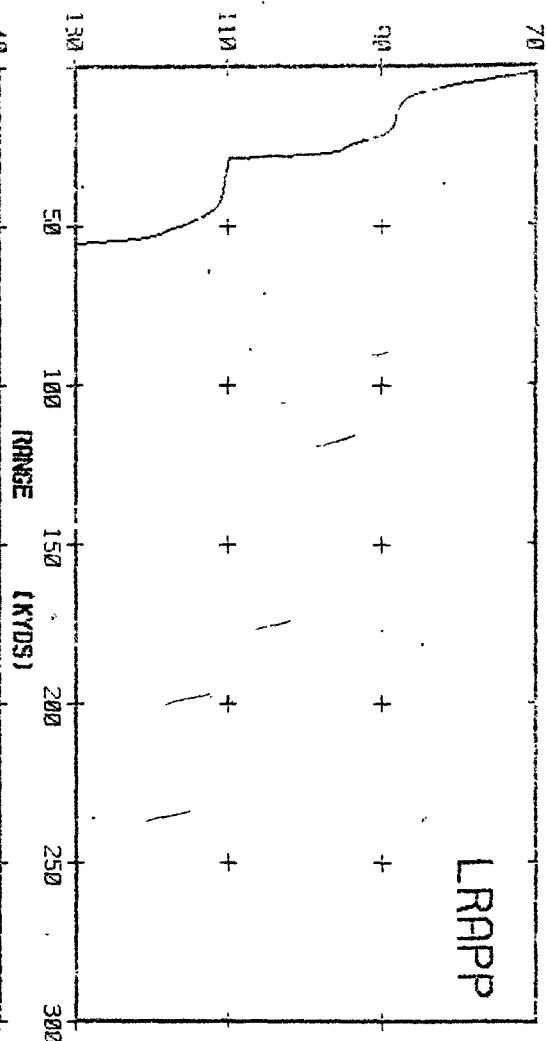


PIPER AB SUMMER

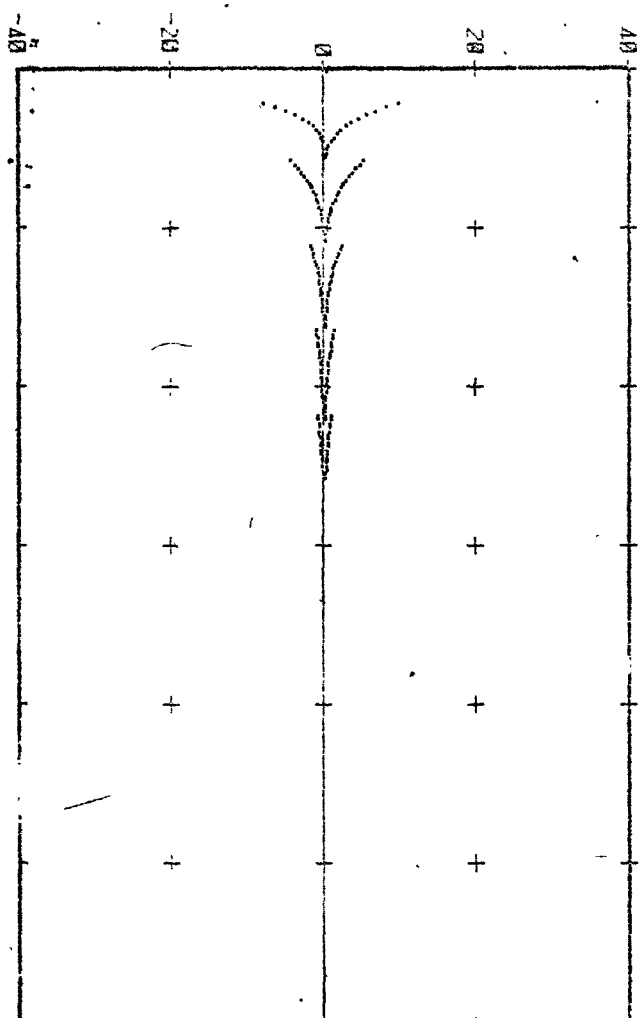
S 20 R 60 F 2000

1450 M/S 1500 1554

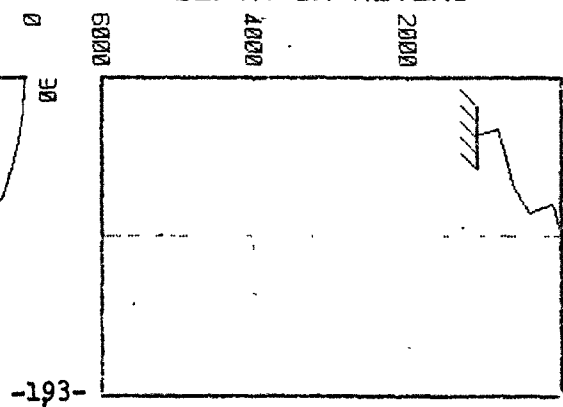
DB LOSS



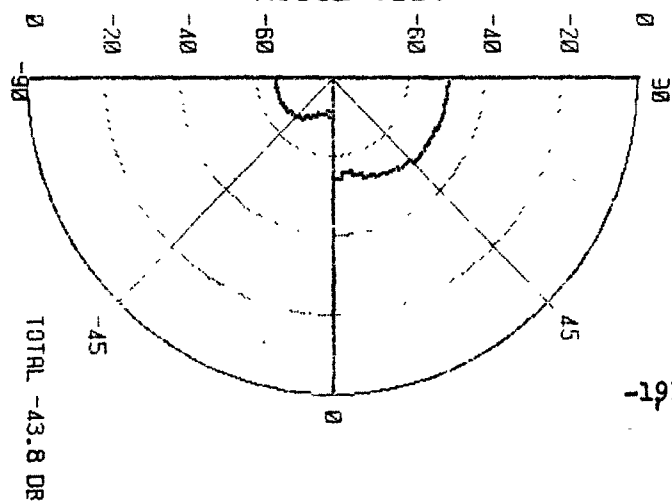
ARRIVAL ANGLE

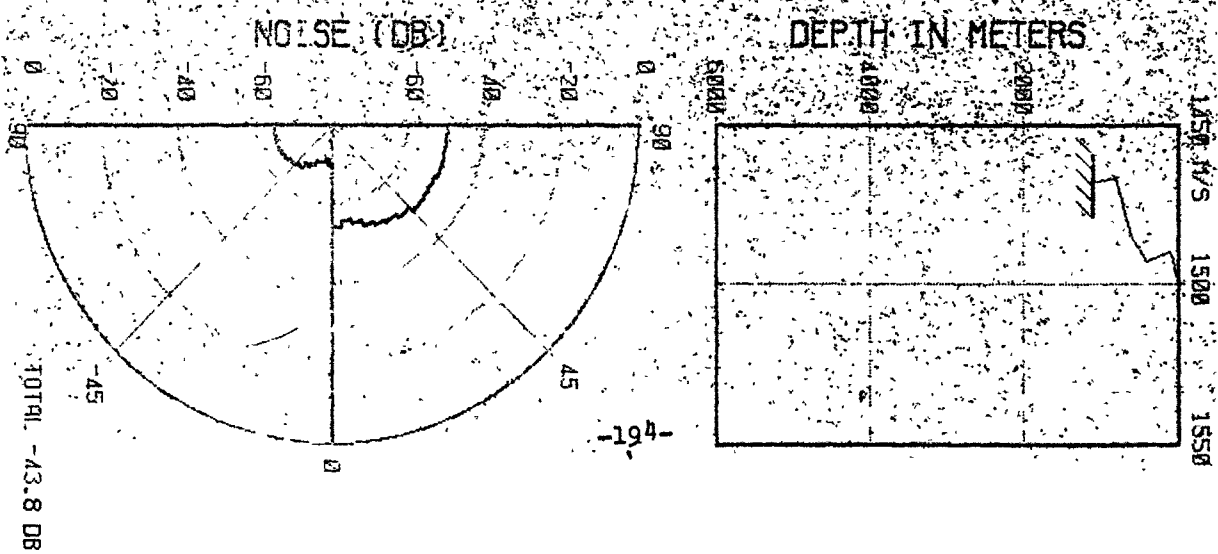
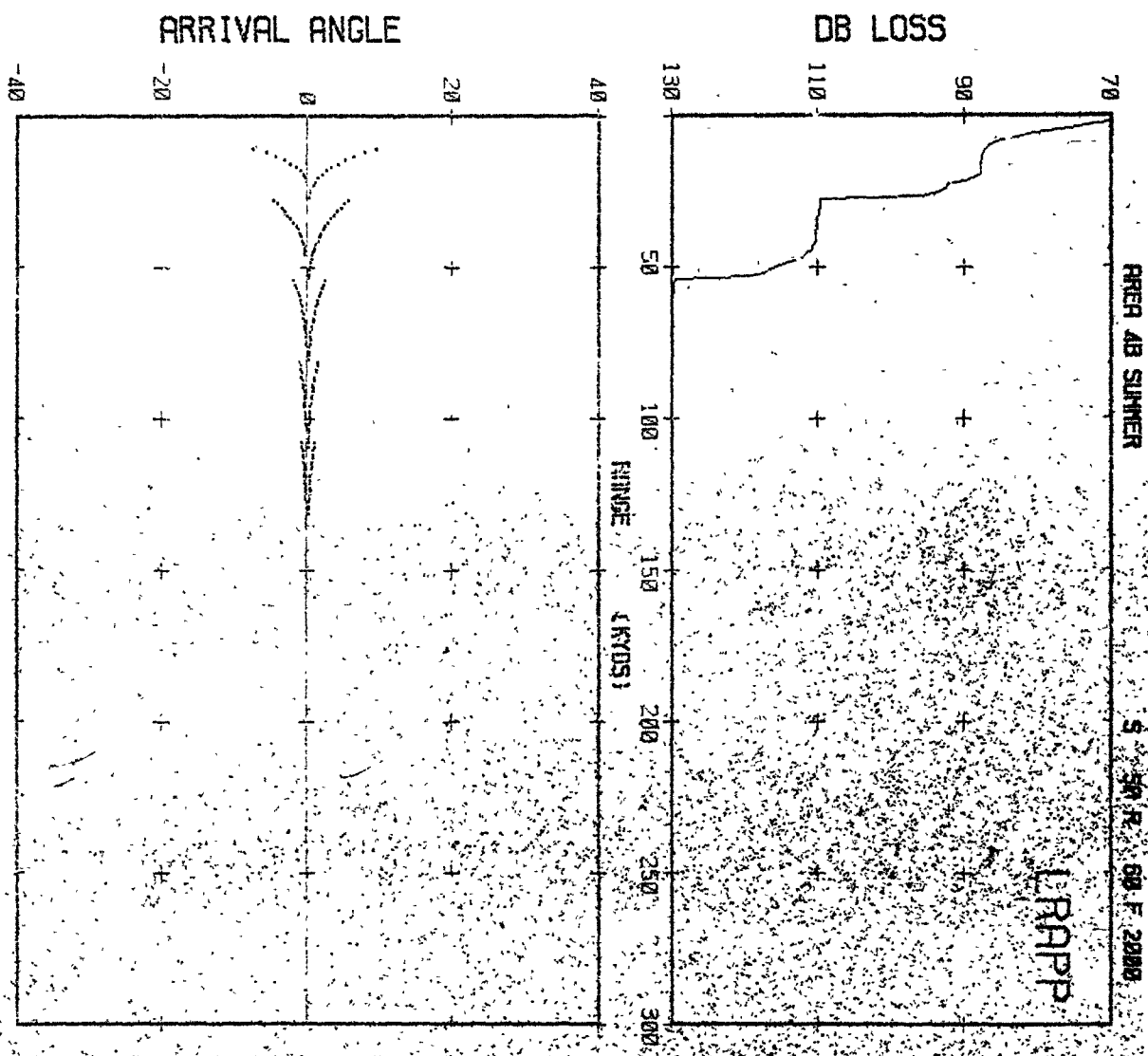


DEPTH IN METERS



NOISE (DB)





GREEN AB SUMMER

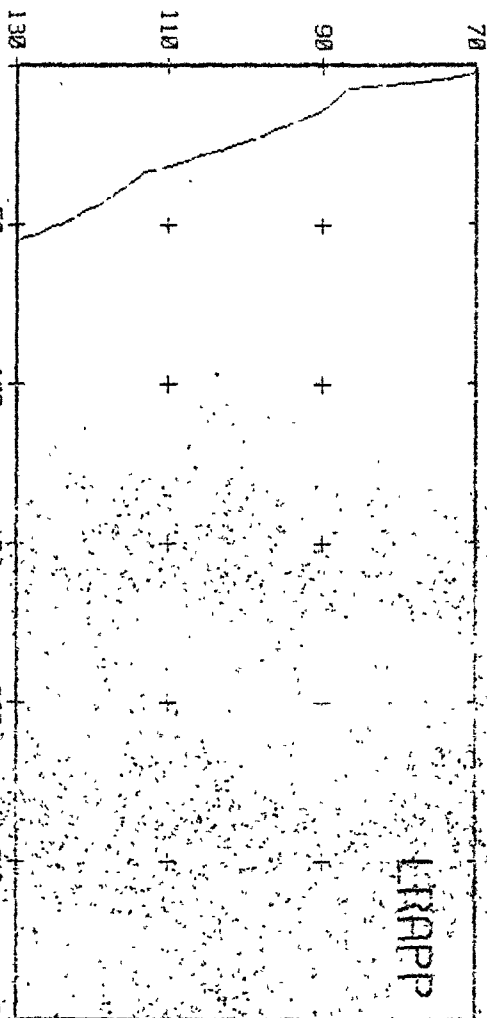
S 265.8 00 F 20.00

1450 H.S.

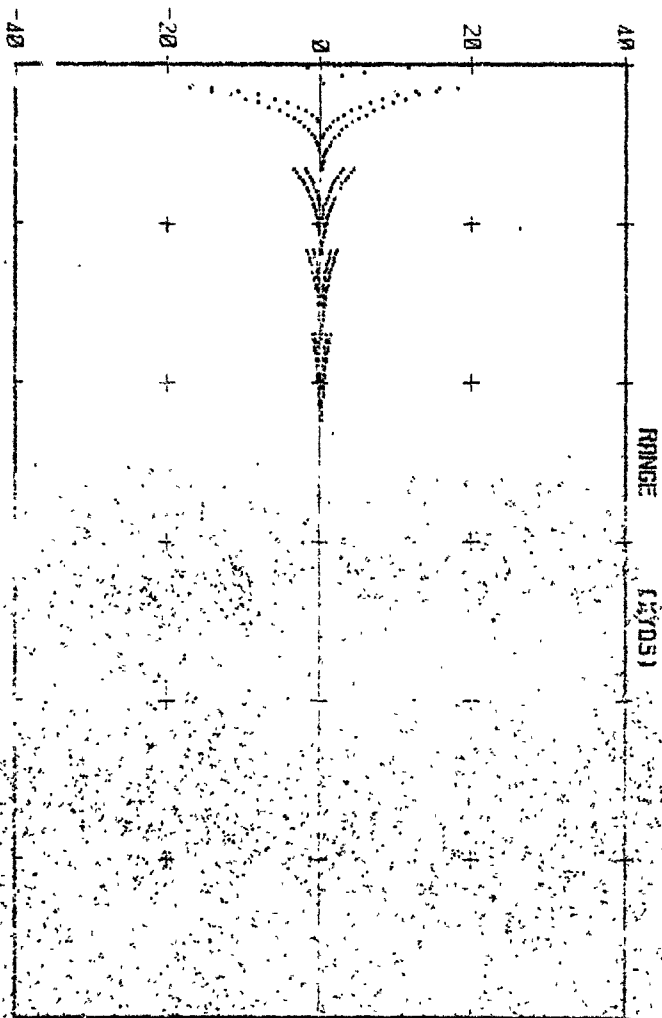
1500

1550

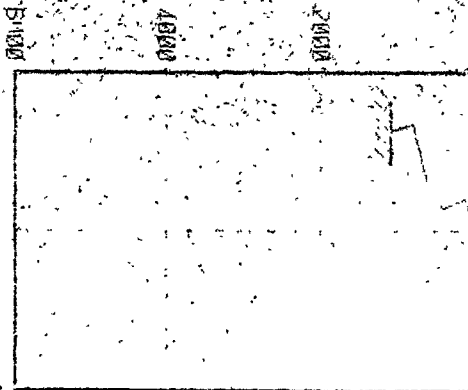
DB LOSS



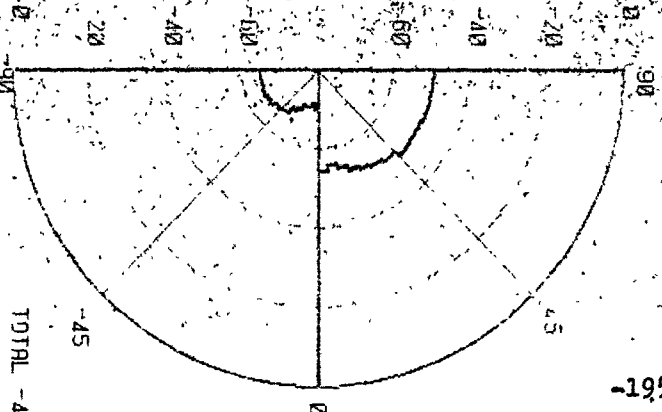
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



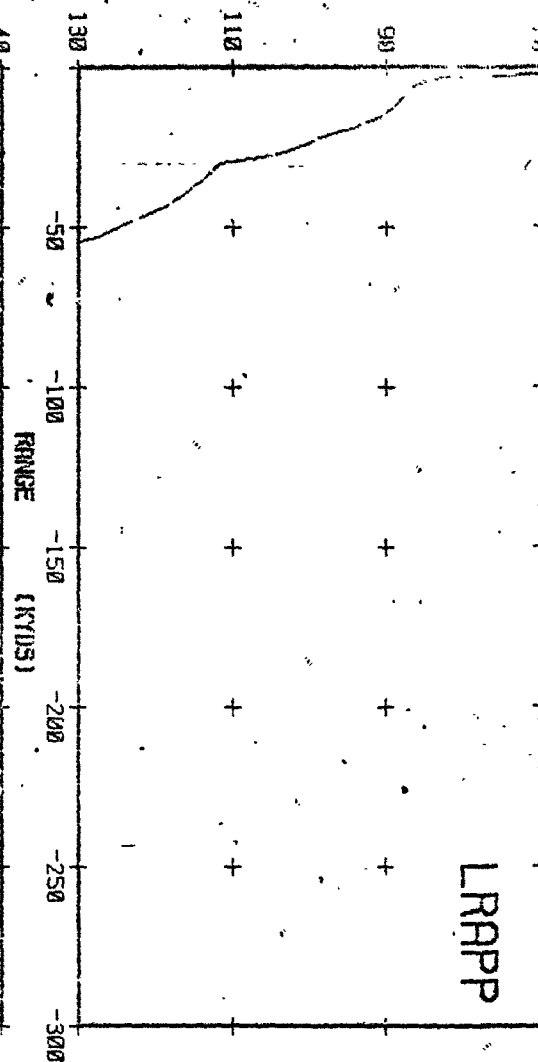
TOTAL -43.8 DB

FIREH A/B SUMMER

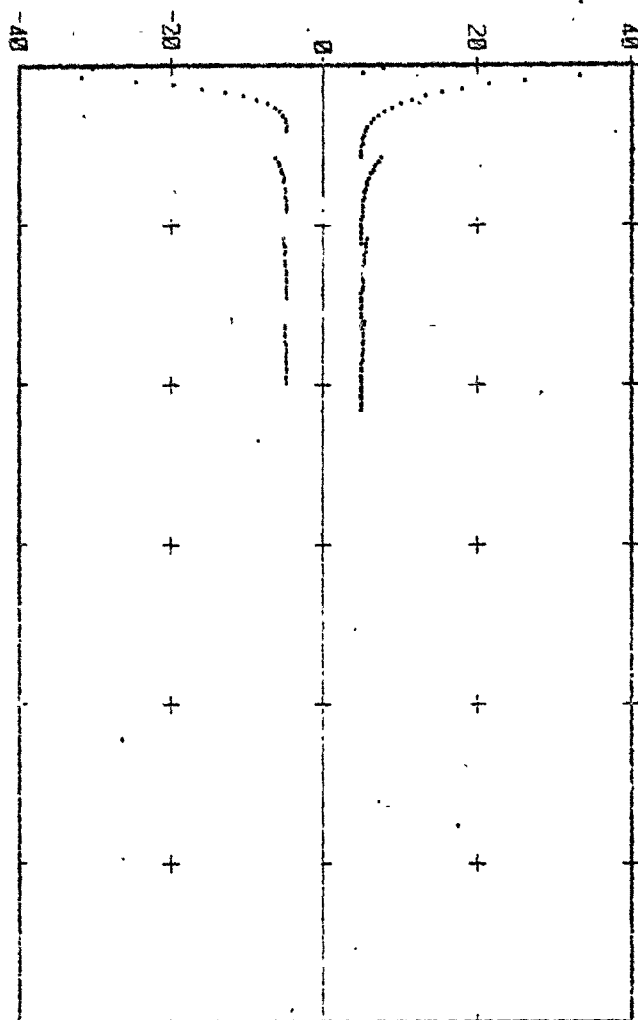
S 20 R 163 F 2000

LRAPP

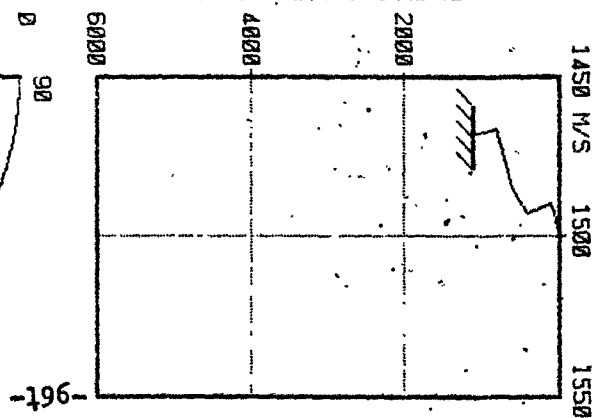
DB LOSS



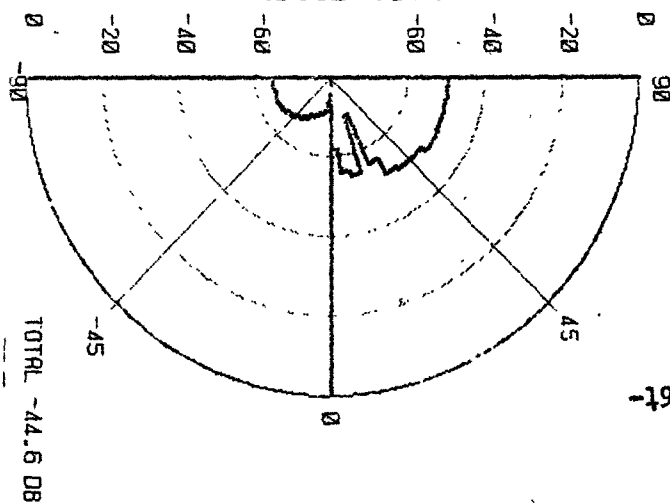
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



TOTAL -44.6 DB

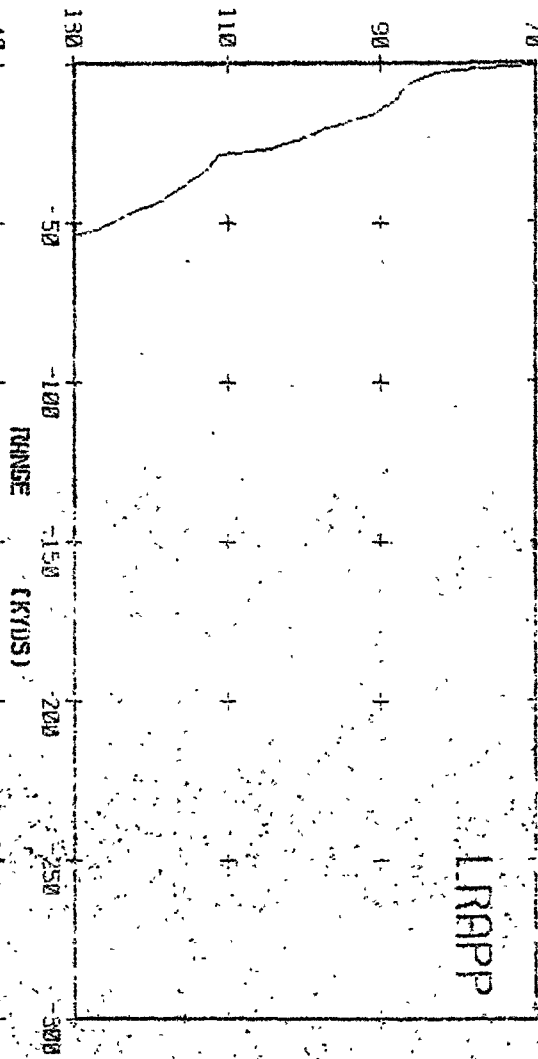
GREEN AB SUMMER

5 JUL 1950

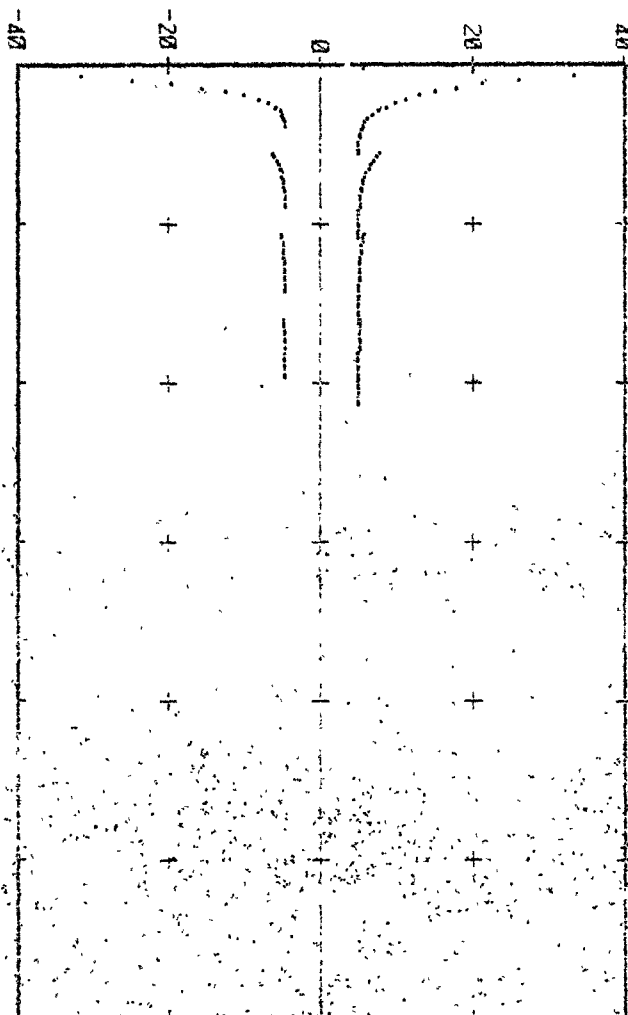
1450 HRS 1500 1550

LRAPP

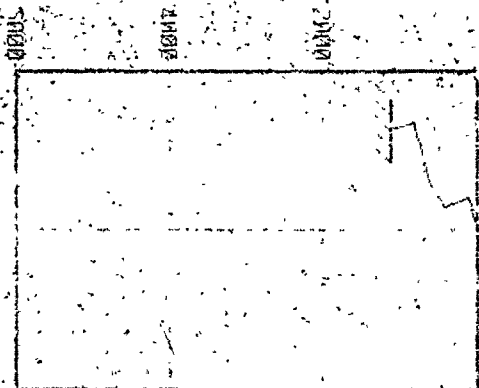
DB LOSS



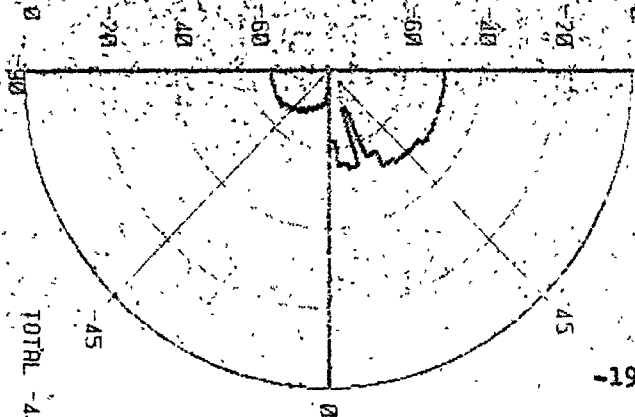
ARRIVAL ANGLE



DEPTH IN METERS

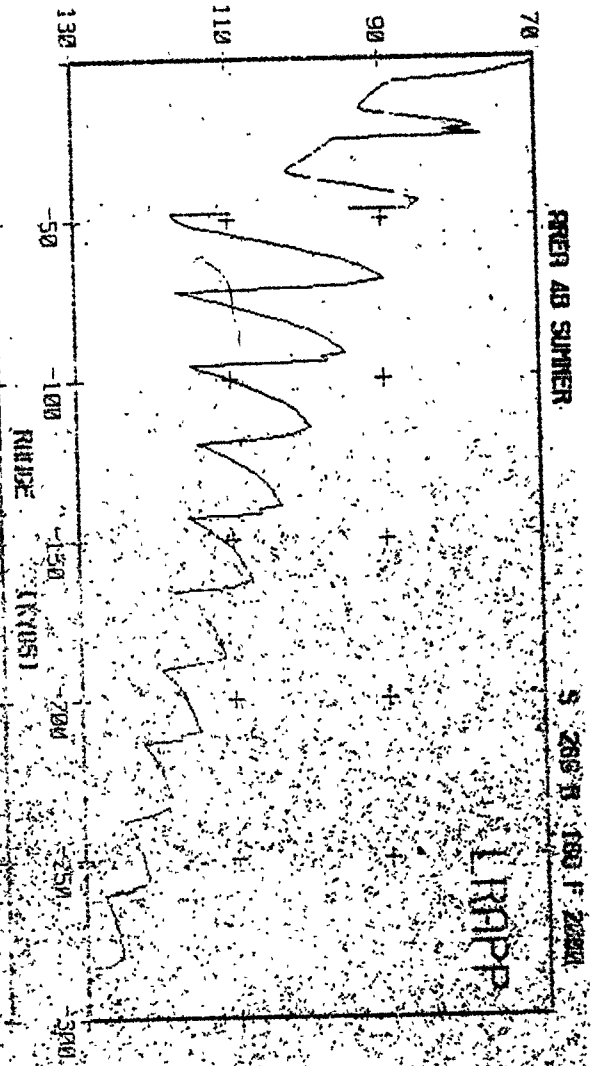


NOISE (DB)



TOTAL -44.6 DB

DB LOSS

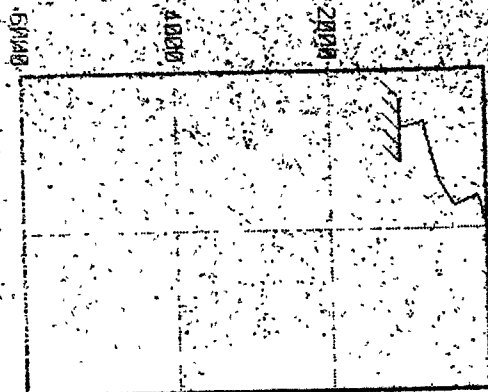


GREEN AB SUMMER

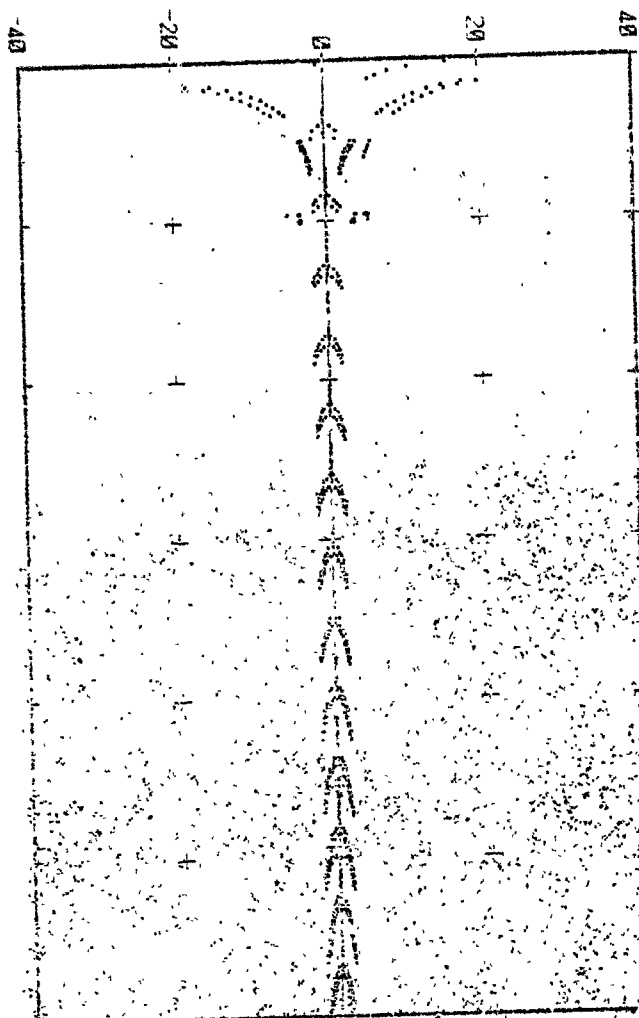
5 260 H. 100 F. 2000

1450 H/S 1500 1550

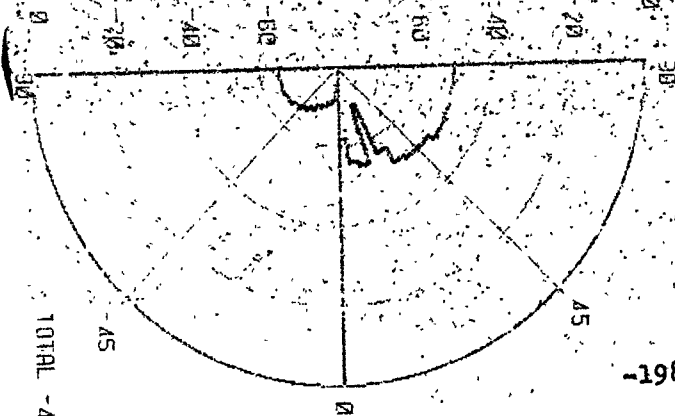
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (dB)



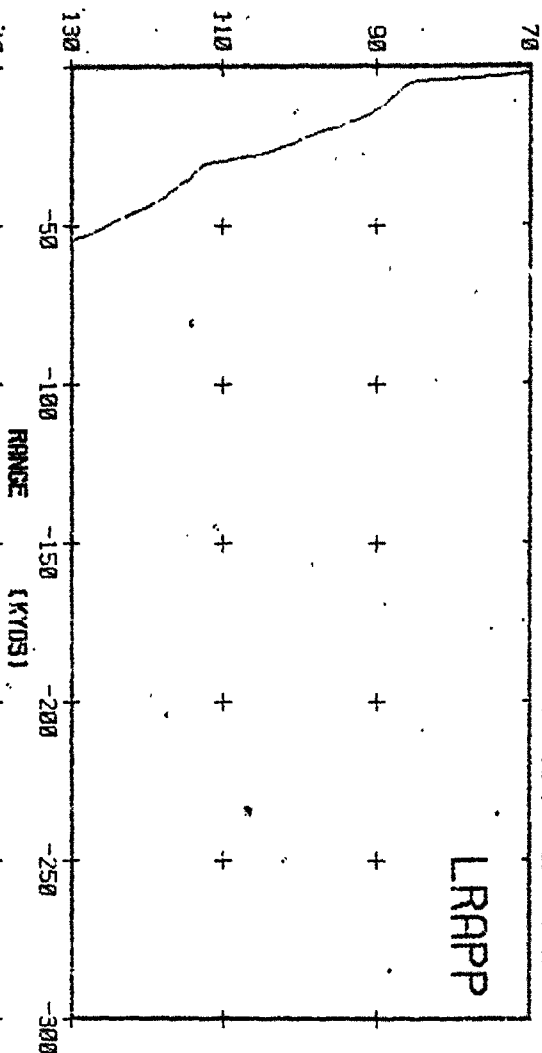
TOTAL -44.6 DB

PRIER AB SUMNER

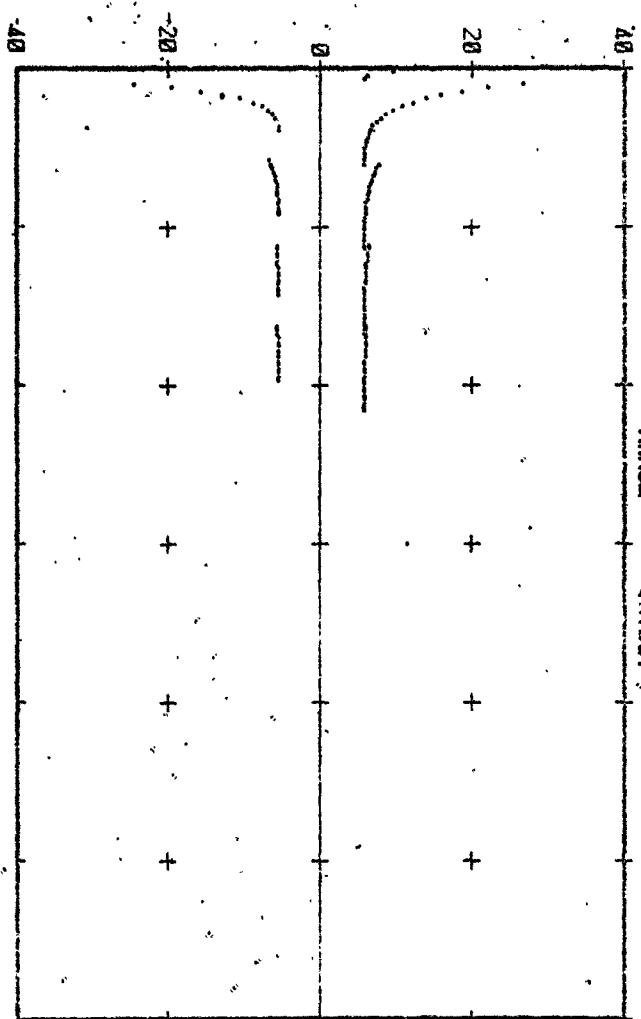
S 20 R 300 F 2000

1450 M/S 1500 1550

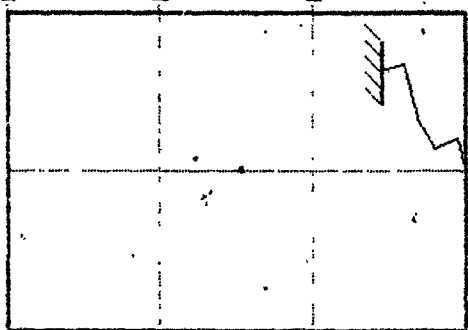
DB LOSS



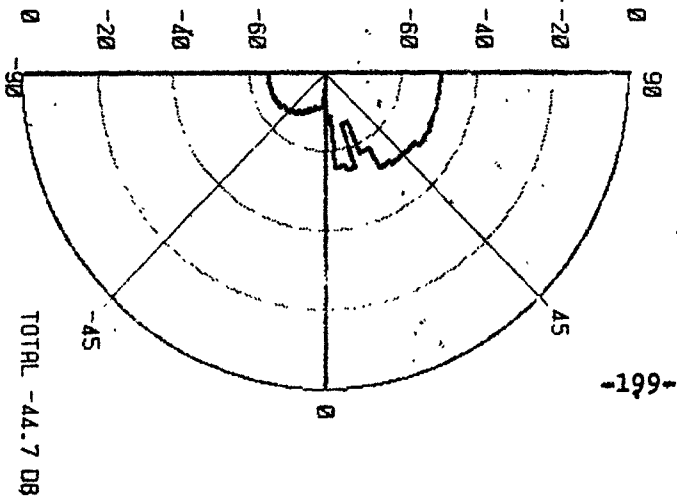
ARRIVAL ANGLE

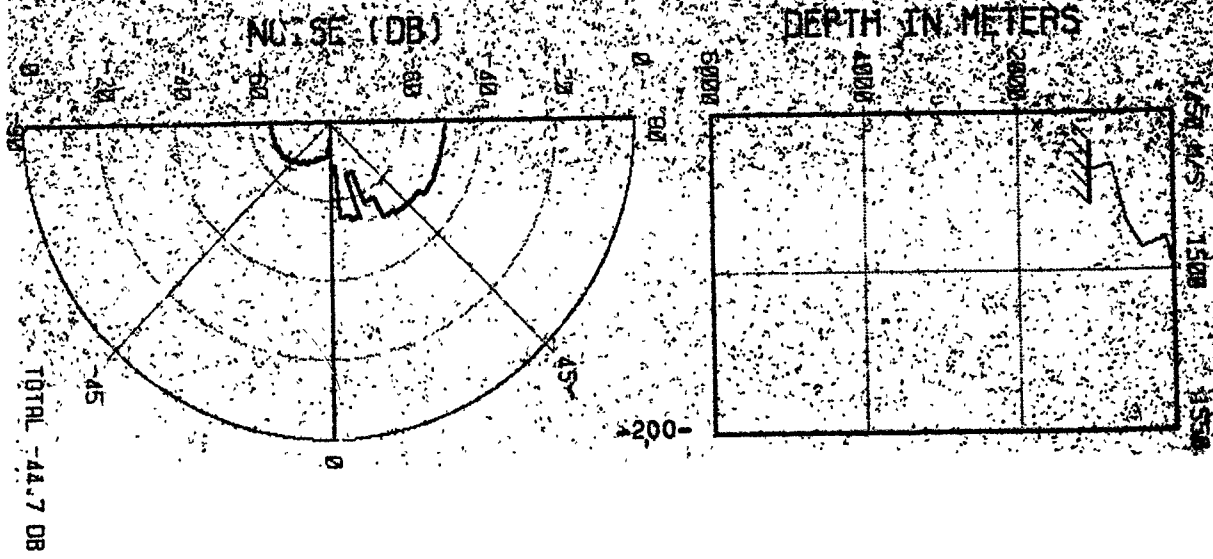
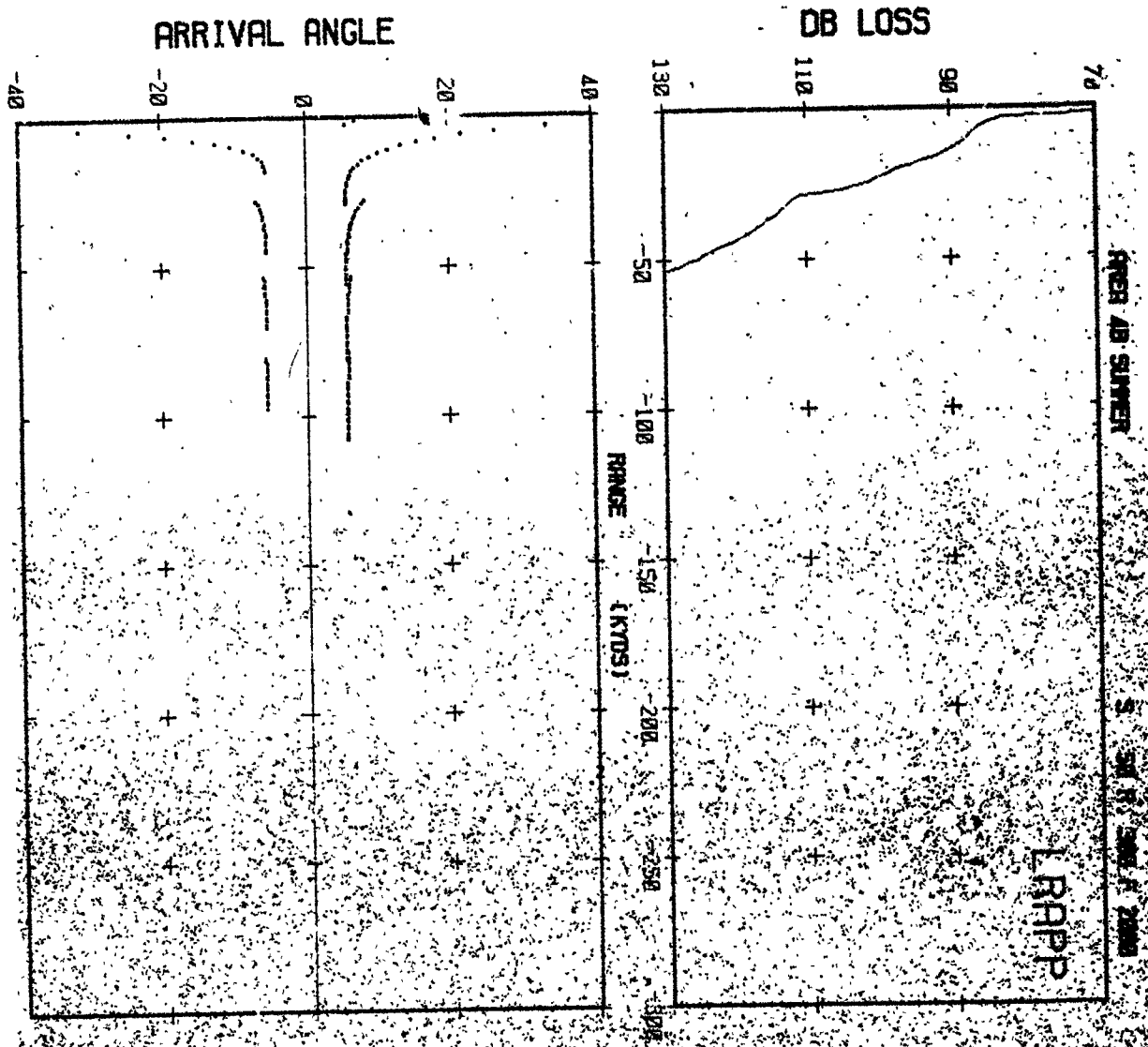


DEPTH IN METERS



NOISE (DB)





AREA AB SUMMER

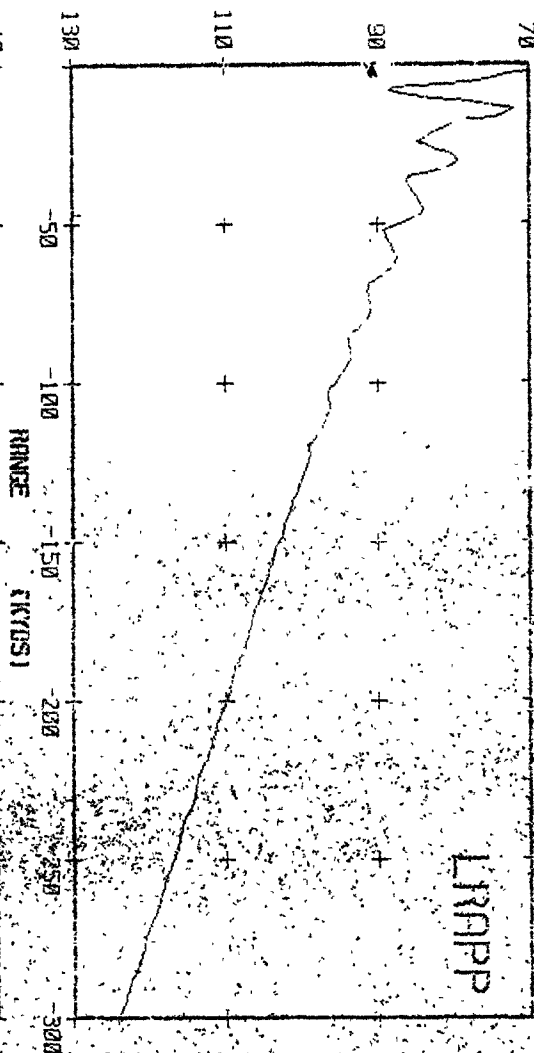
S 205 R 300 F 2000

1750 M/S

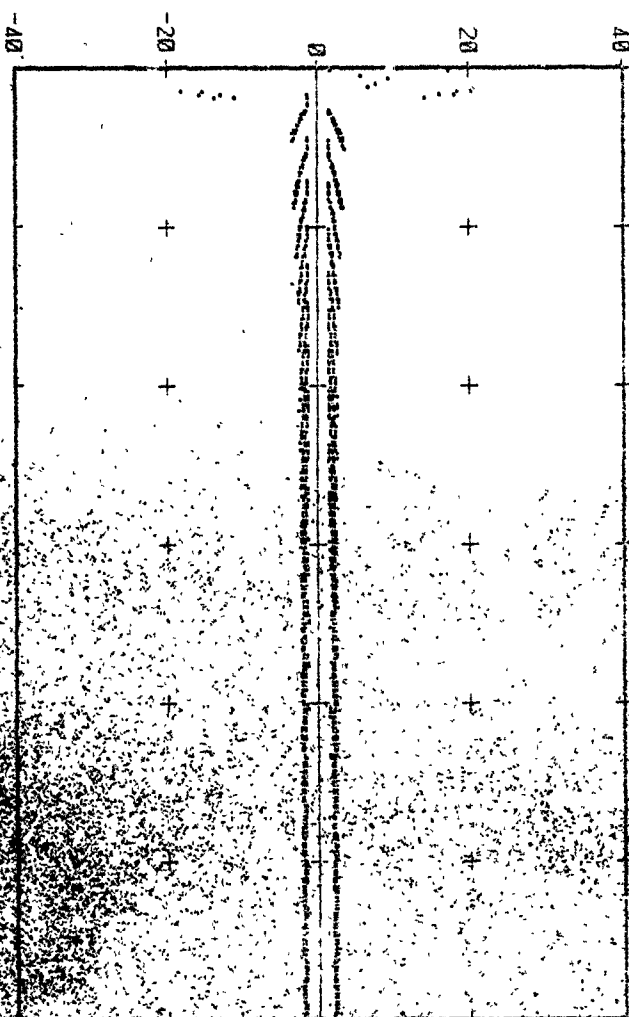
1500

1550

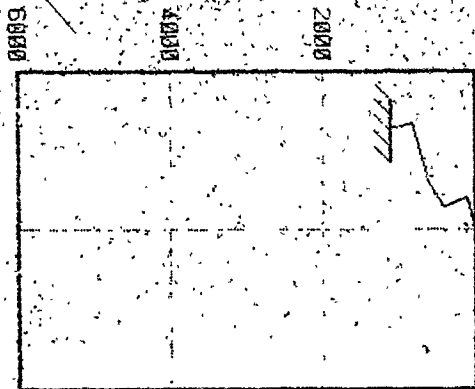
DB LOSS



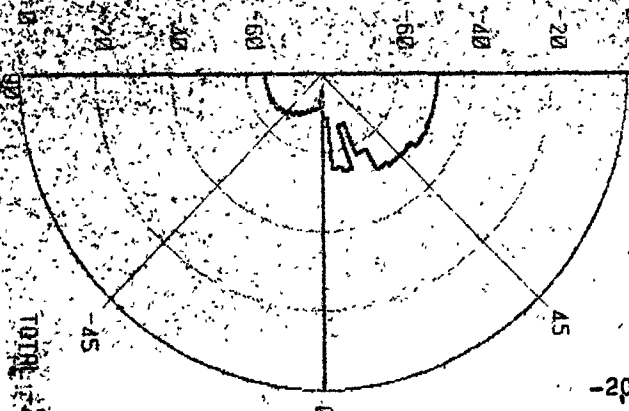
ARRIVAL ANGLE



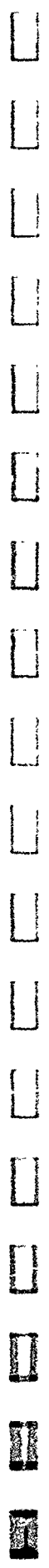
DEPTH IN METERS



NOISE (DB)



TOTAL 44.7 DB



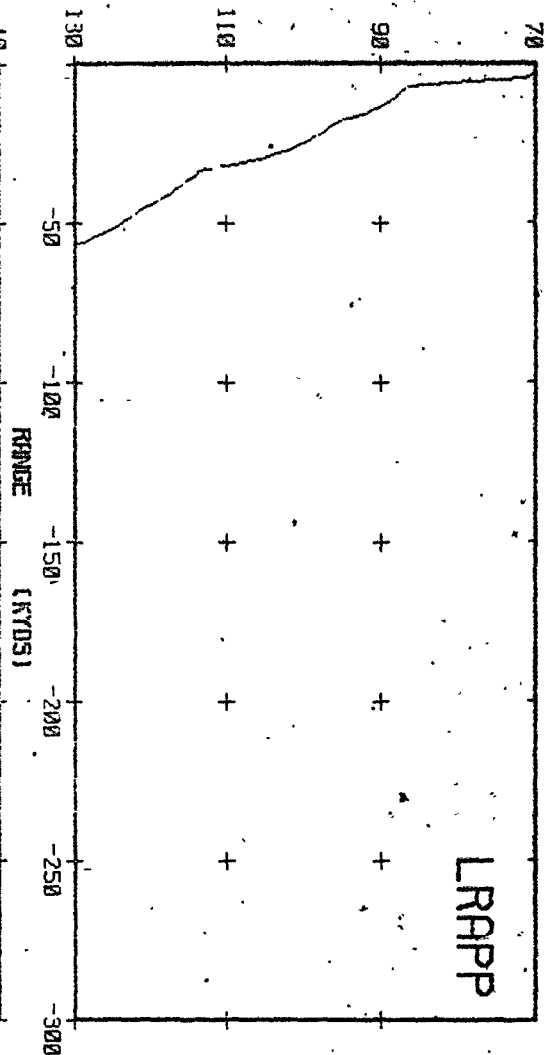
PRER AB SUMMER

S 20 R 1000 F 2000

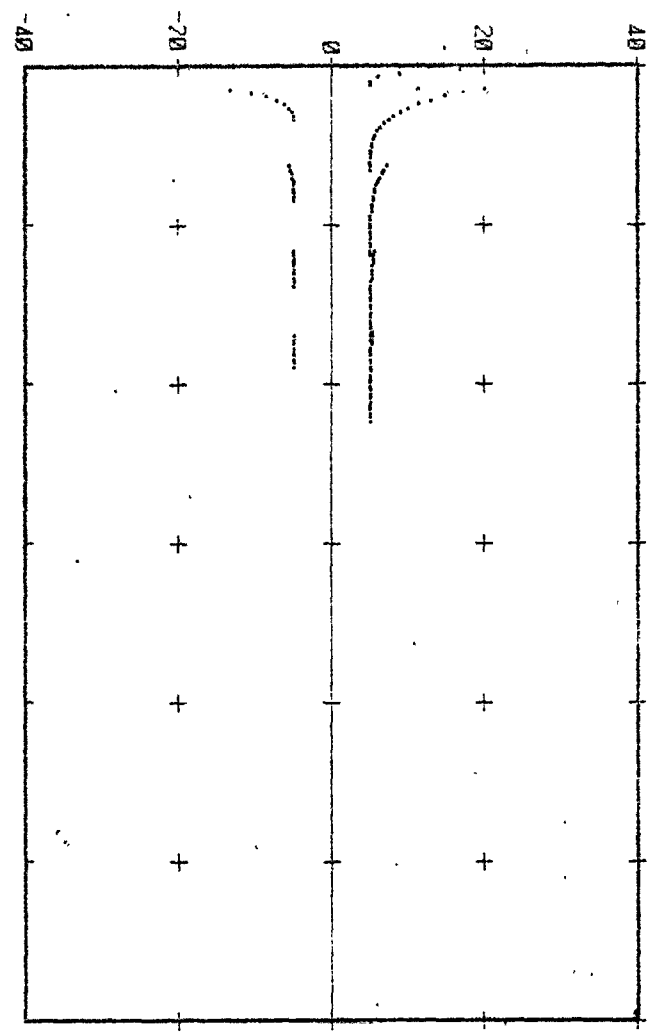
1450 M/S 1500

1550

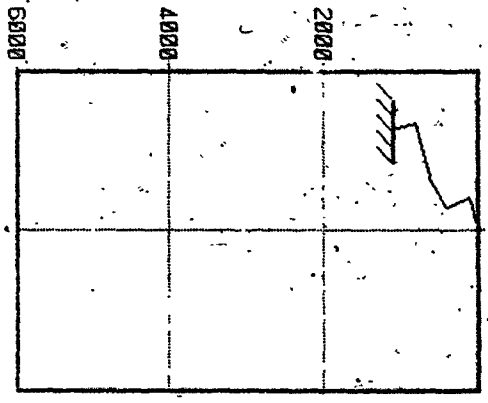
DB LOSS



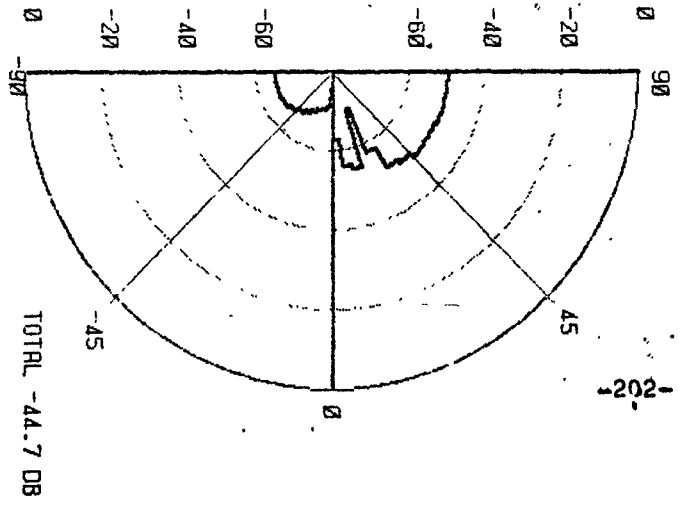
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



TOTAL -44.7 DB

ARRR AB SUNKER

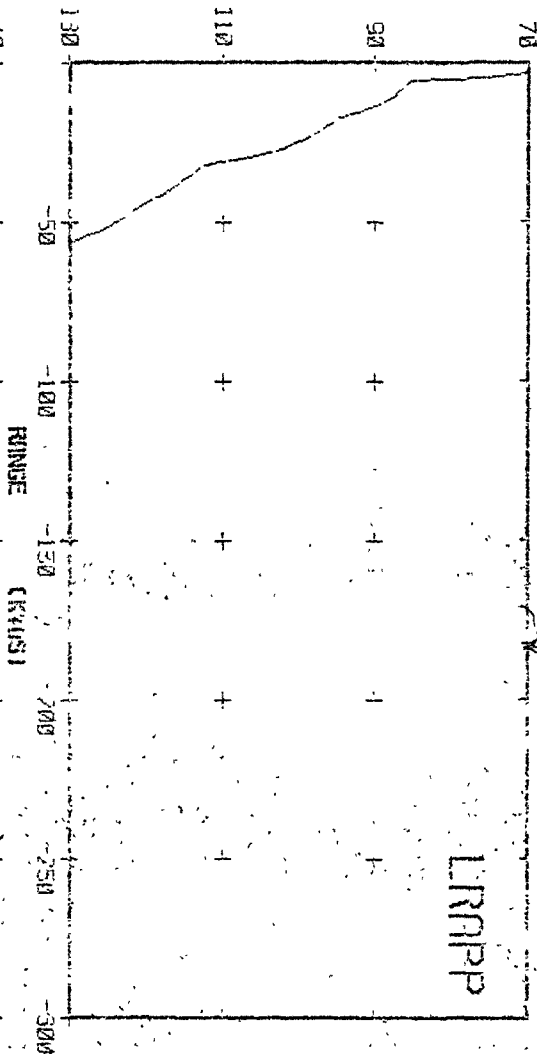
S 50° R 12000 F 2000

1450 M/S

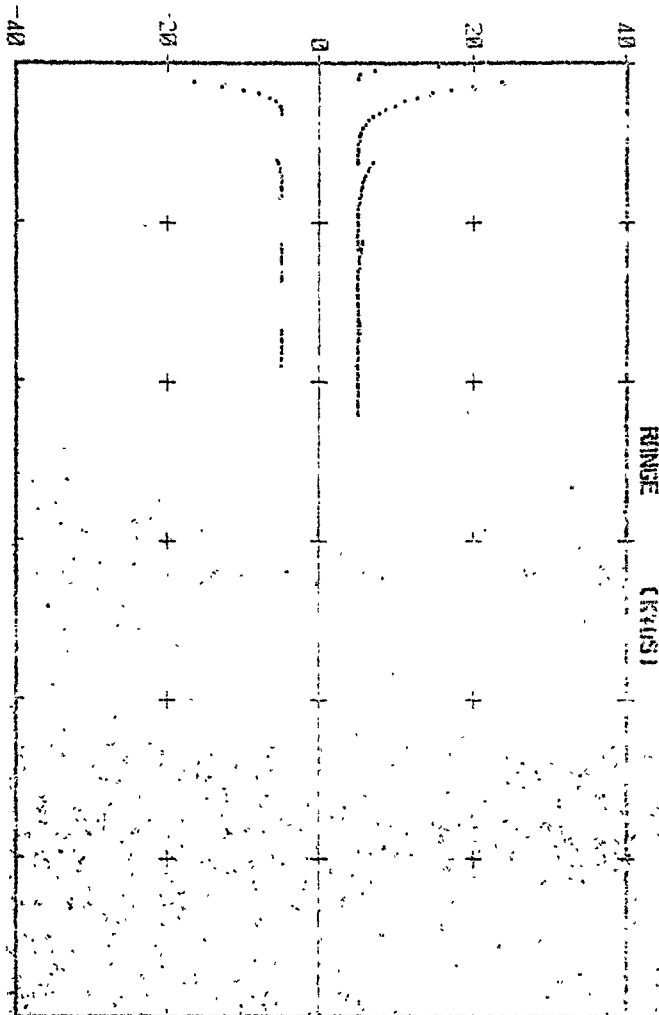
1500

1550

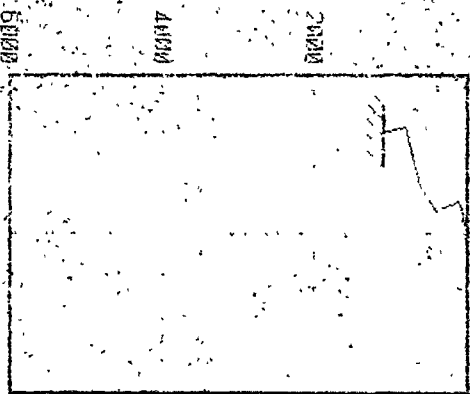
DB LOSS



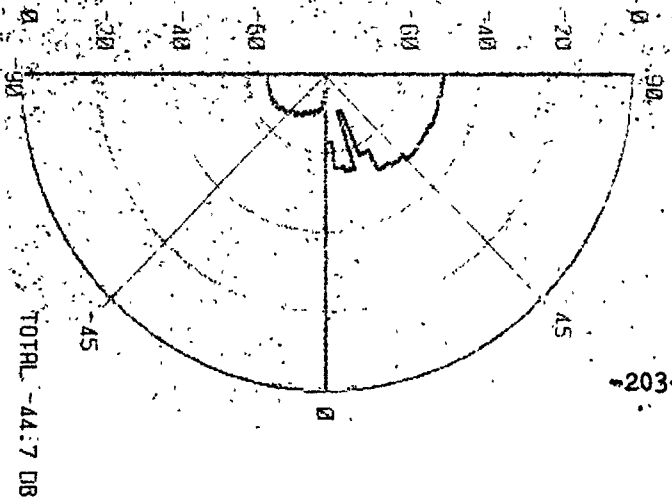
ARRIVAL ANGLE



SUBMERGED NOISE



NOISE (DB)



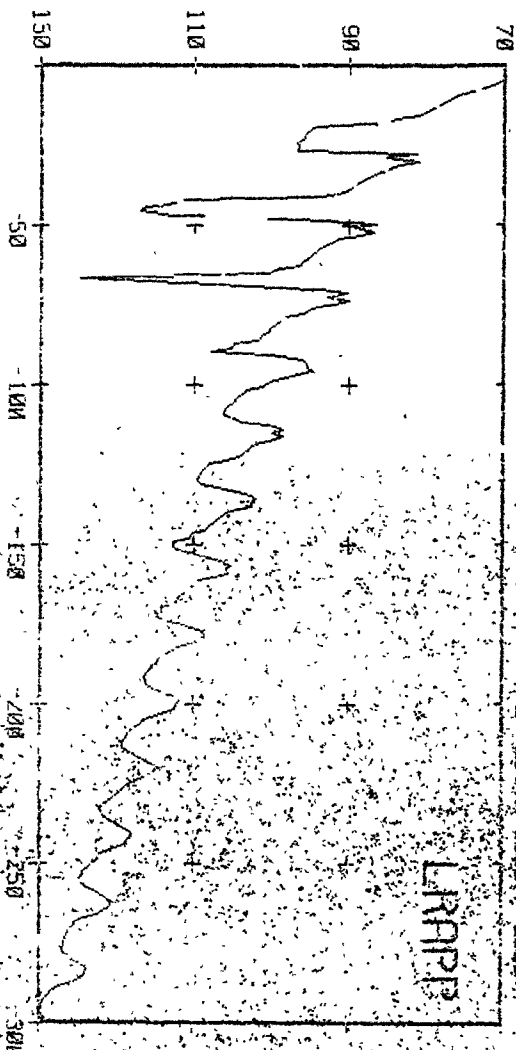


AREA AB SUMMER

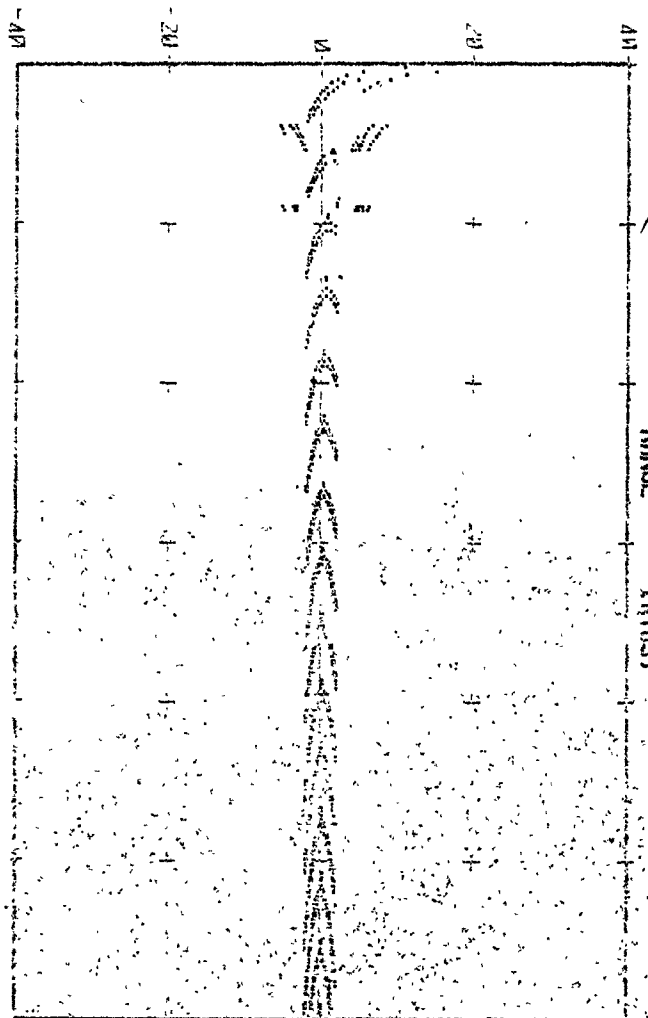
9 2500 1000 2000

1450 1500 1550

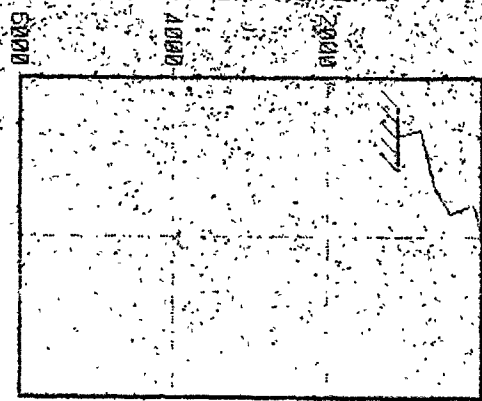
DB LOSS



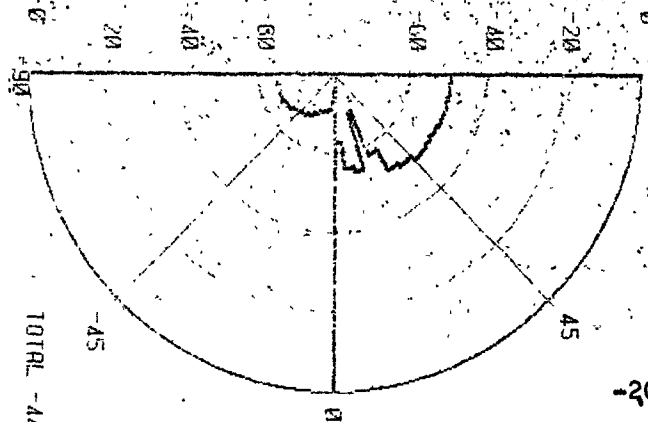
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



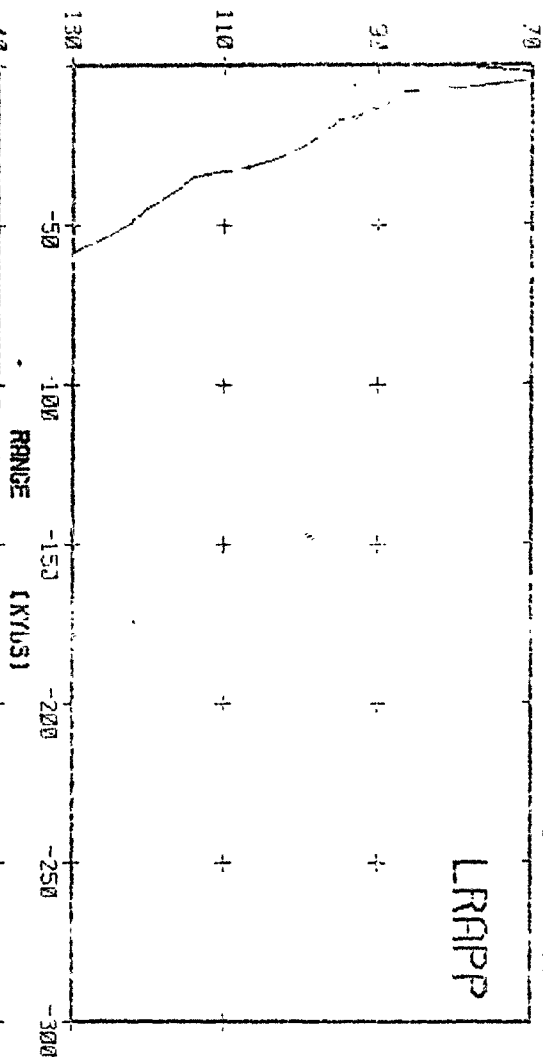
TOTAL -44.7 DB

SHR4 AB SUMMER

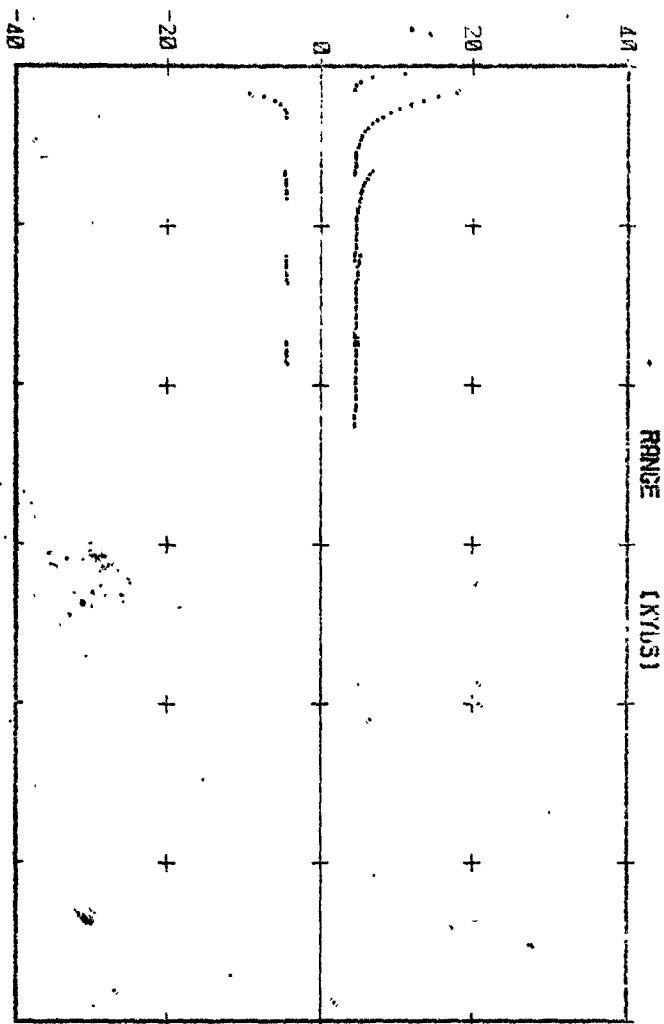
S 20 R 1312 F 2000

1450 M/S 1500 1550

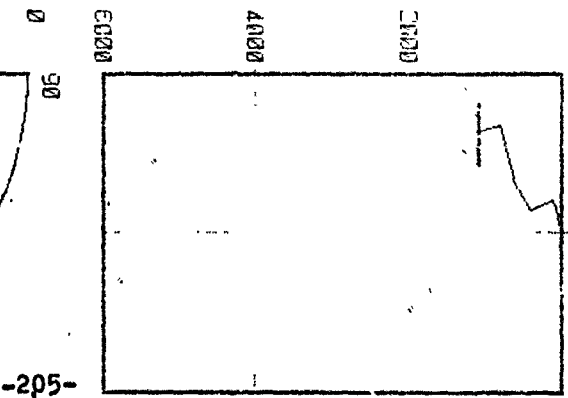
DB LOSS



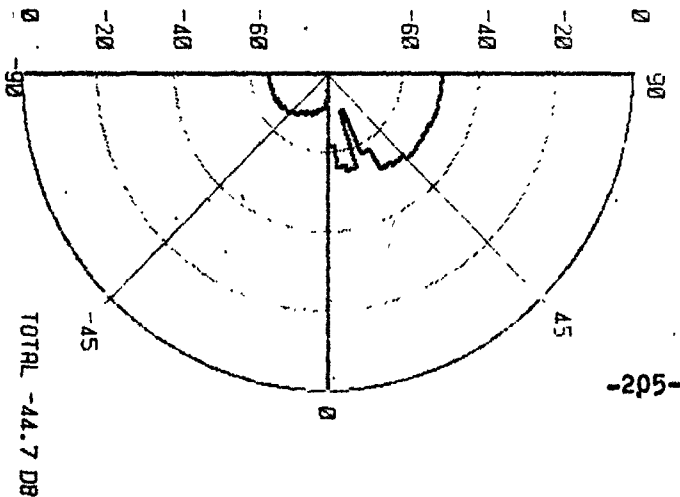
ARRIVAL ANGLE

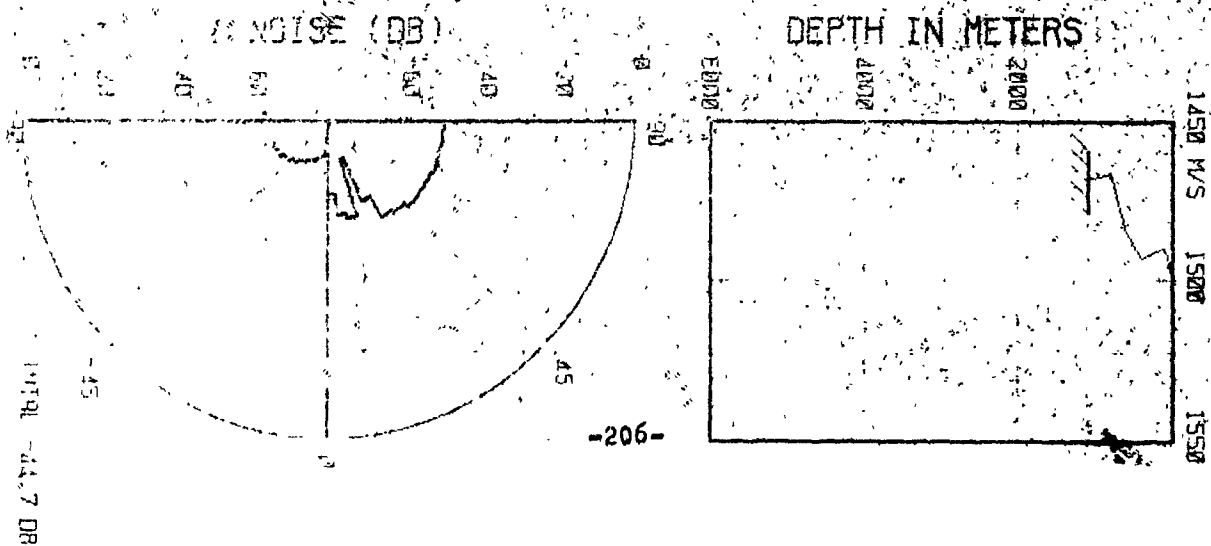
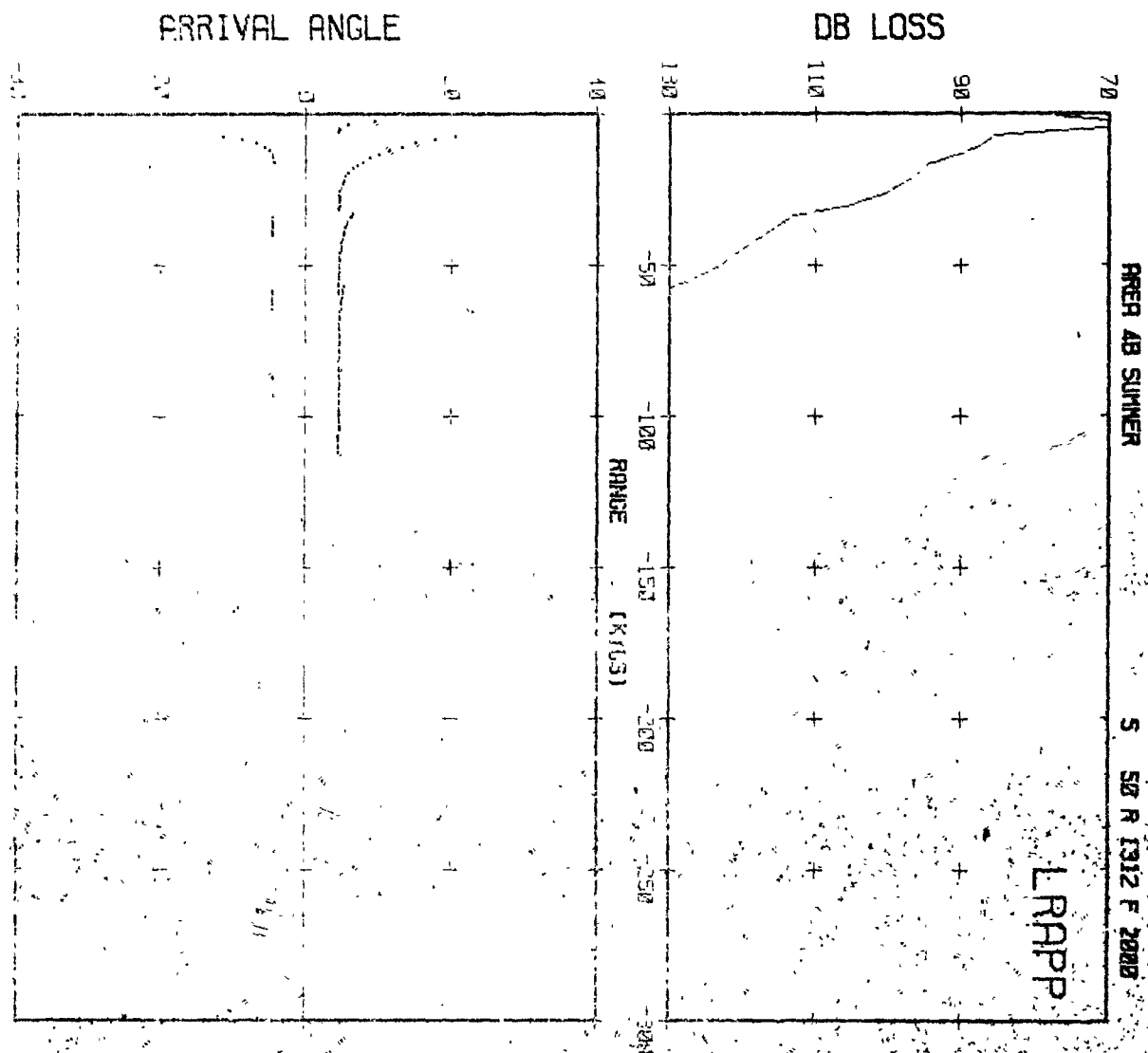


DEPTH IN METERS



NOISE (DB)



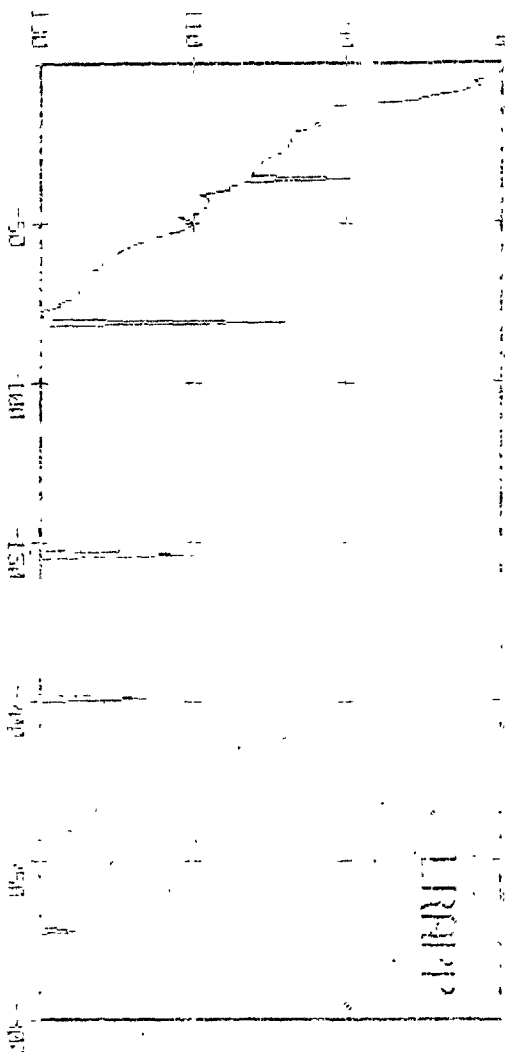


FIRE AR SUMMER

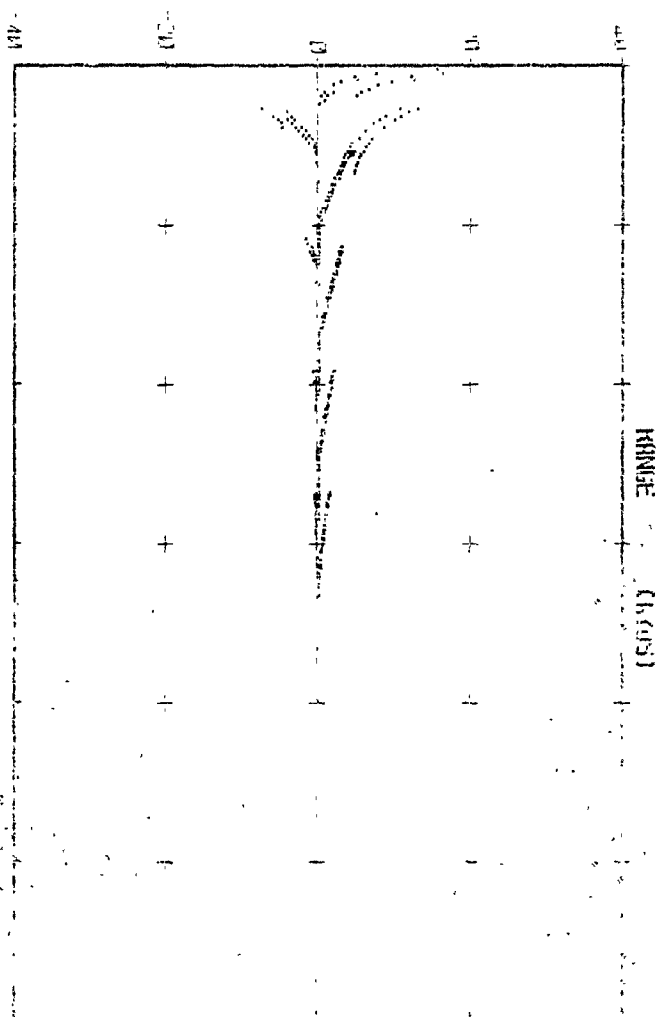
5 SEP 1912 F 2000

1400 1500 1500

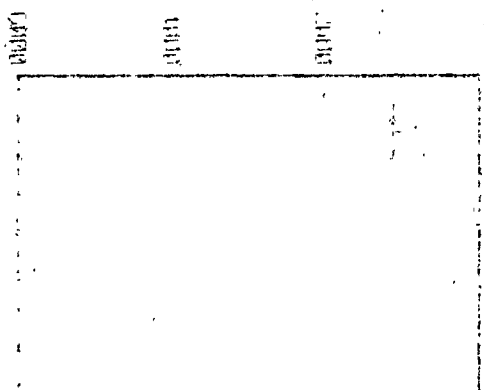
DB LOSS



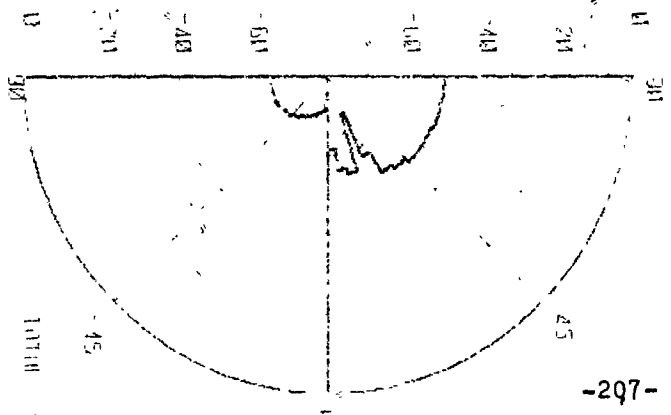
ARRIVAL ANGLE

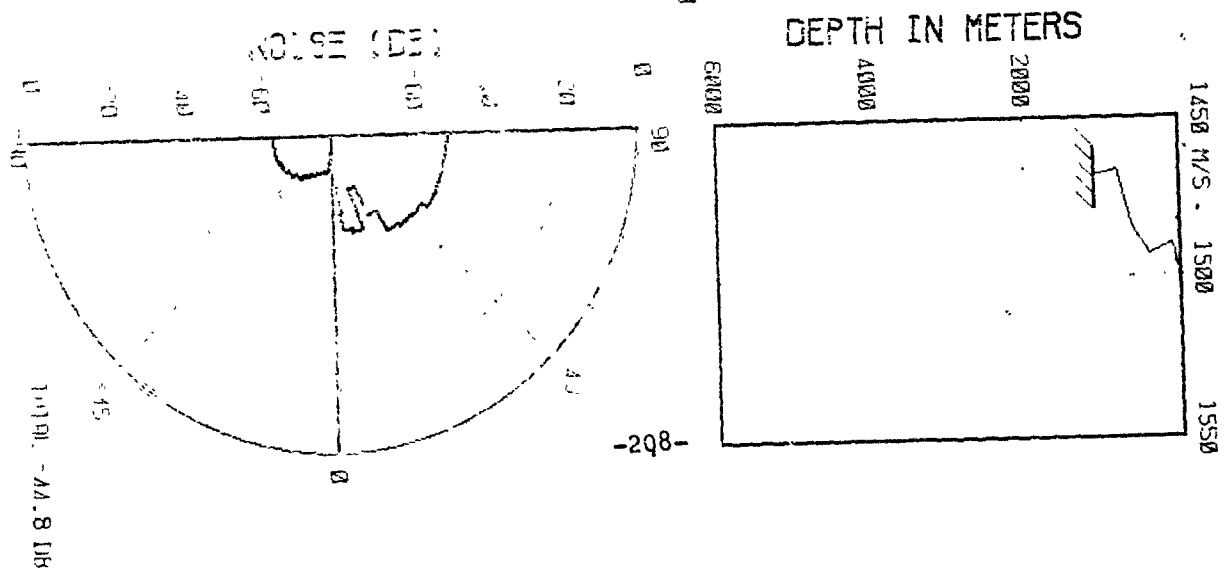
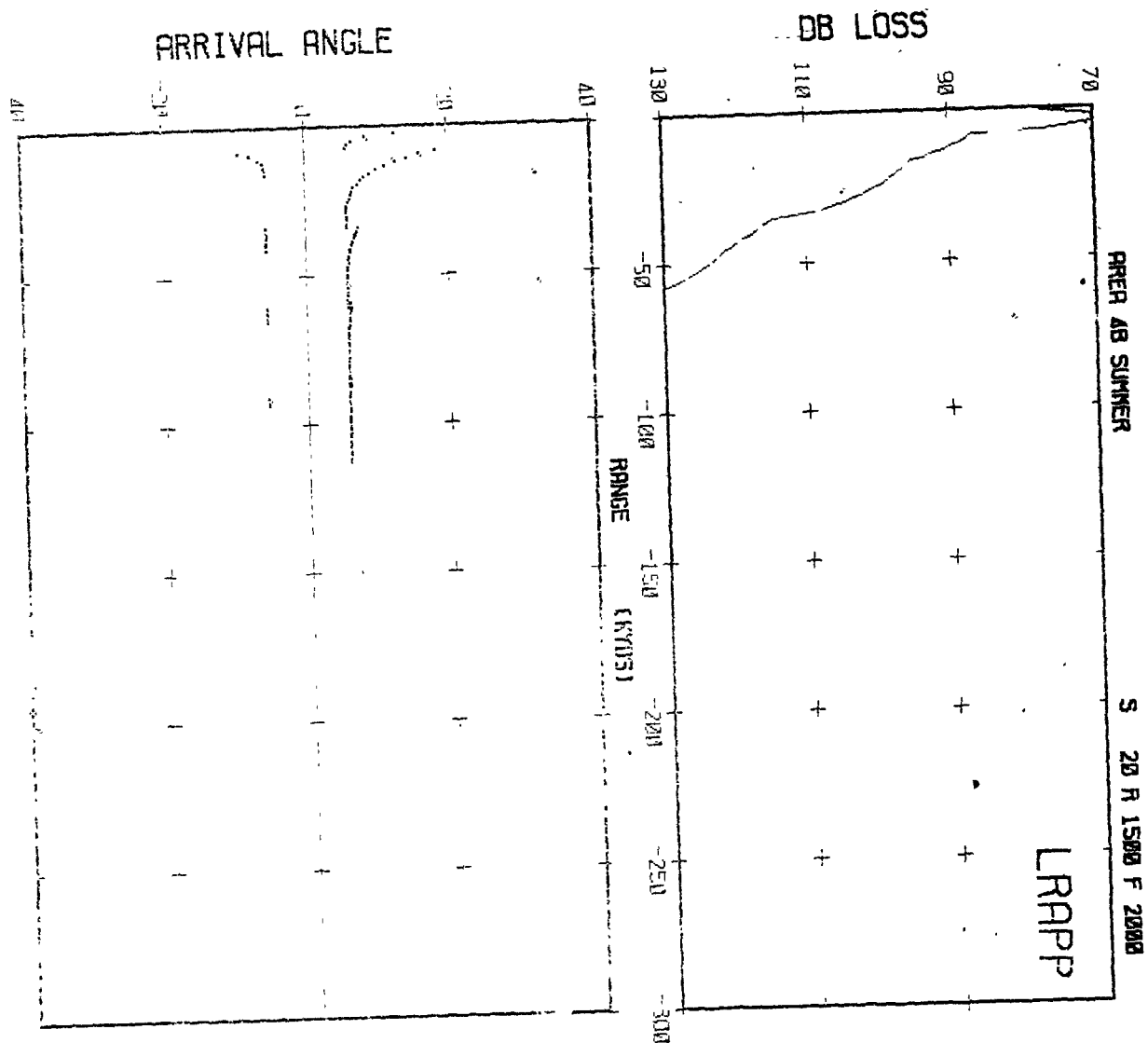


DEPTH IN METERS



NOISE (DB)





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DE LOSS

002-147113

1

NOISE (02)

SECRET

1. The first part of the document is a title page. It contains the title of the document, the author's name, and the date of the document. The title is "The First Part of the Document". The author's name is "John Doe". The date is "12/12/2023".

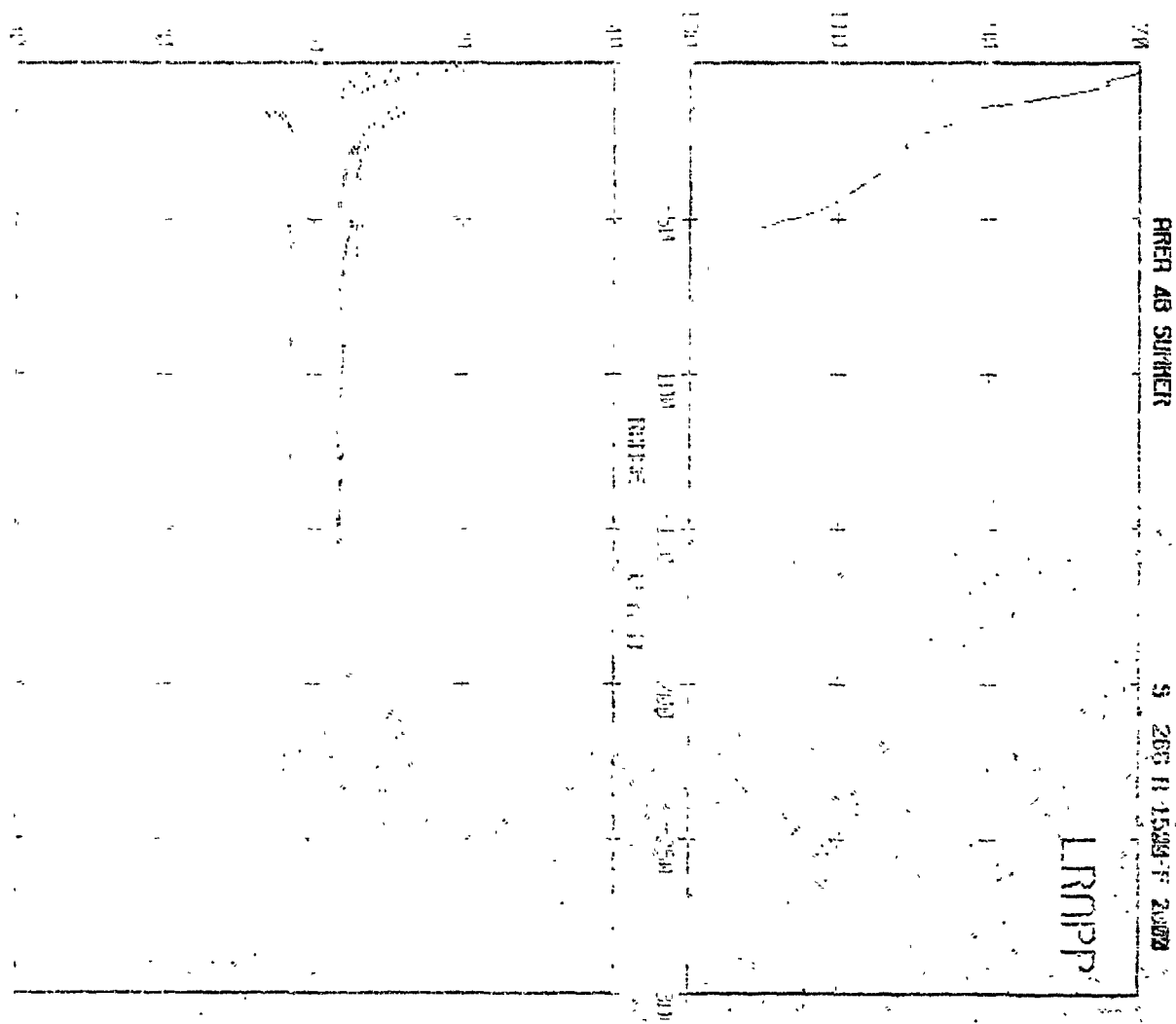
-209-

TOTAL -44.3 DR

I

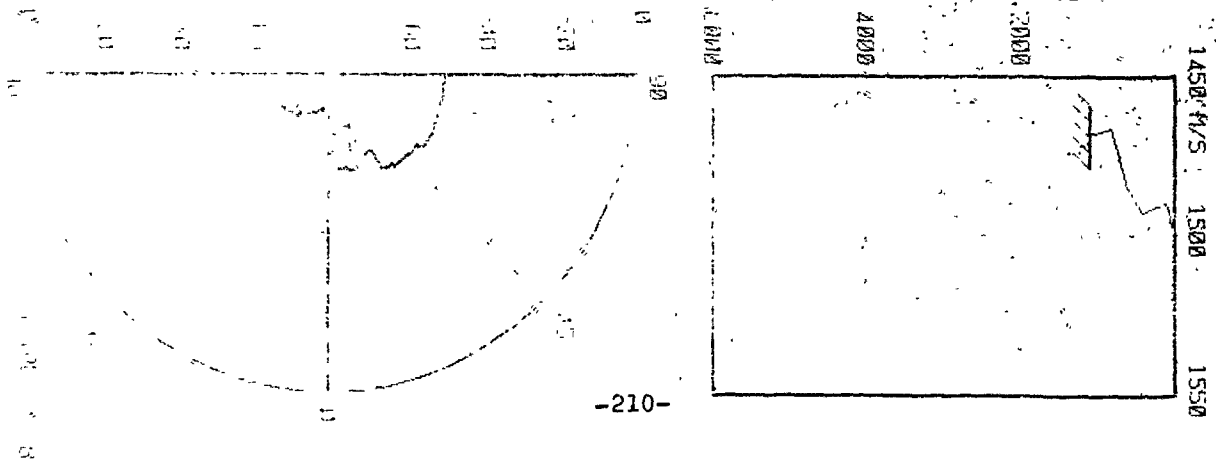
ARRIVAL ANGLE

DB LOSS



ARRIVAL ANGLE

DEPTH IN METERS

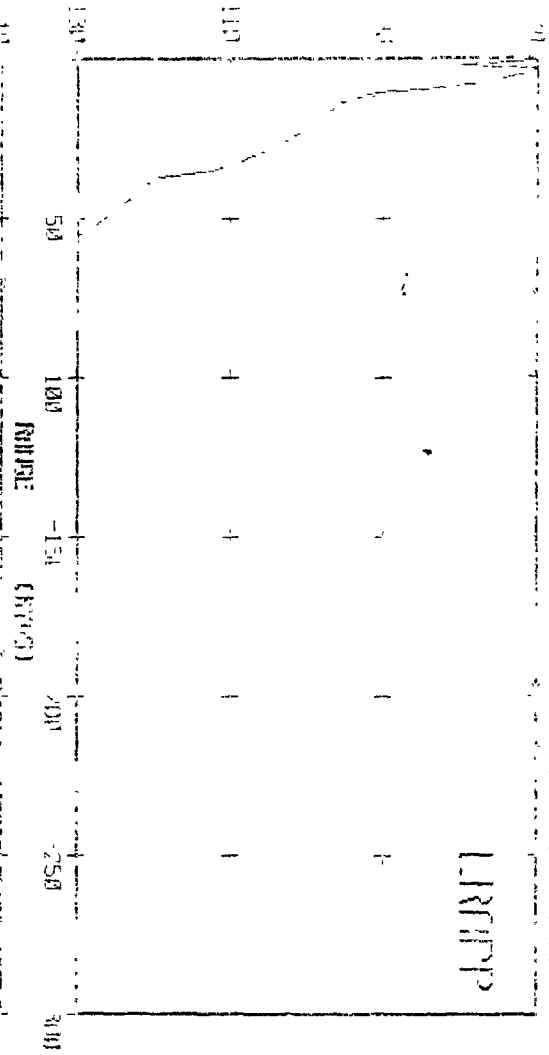


FRONT END SUBMER

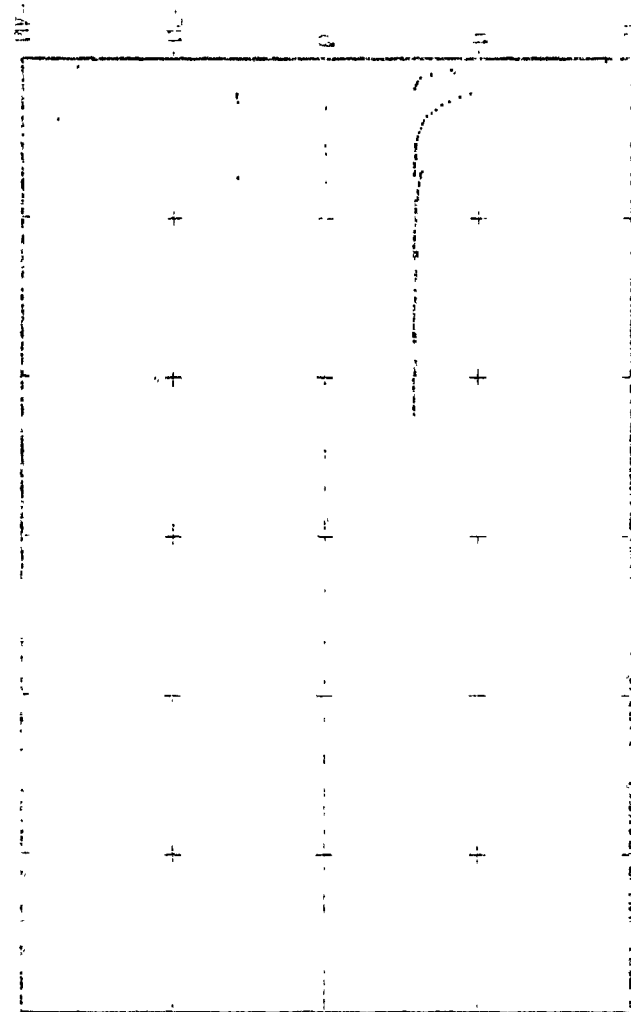
S 20 H 2025 F 2000

LRRFP

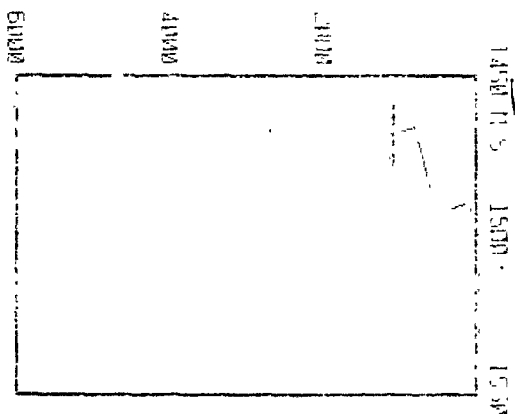
DB LOSS



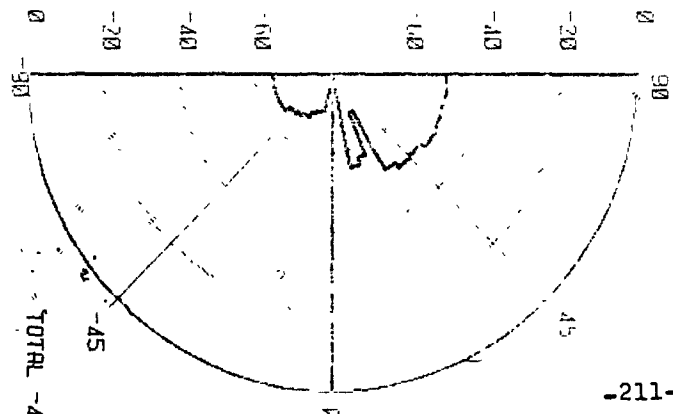
ARRIVAL ANGLE



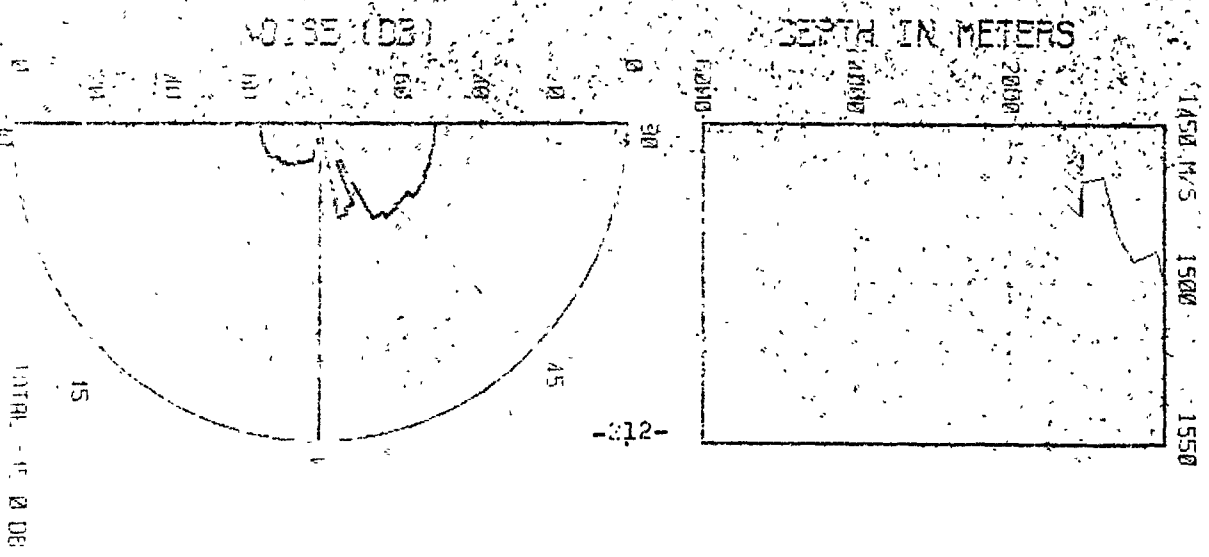
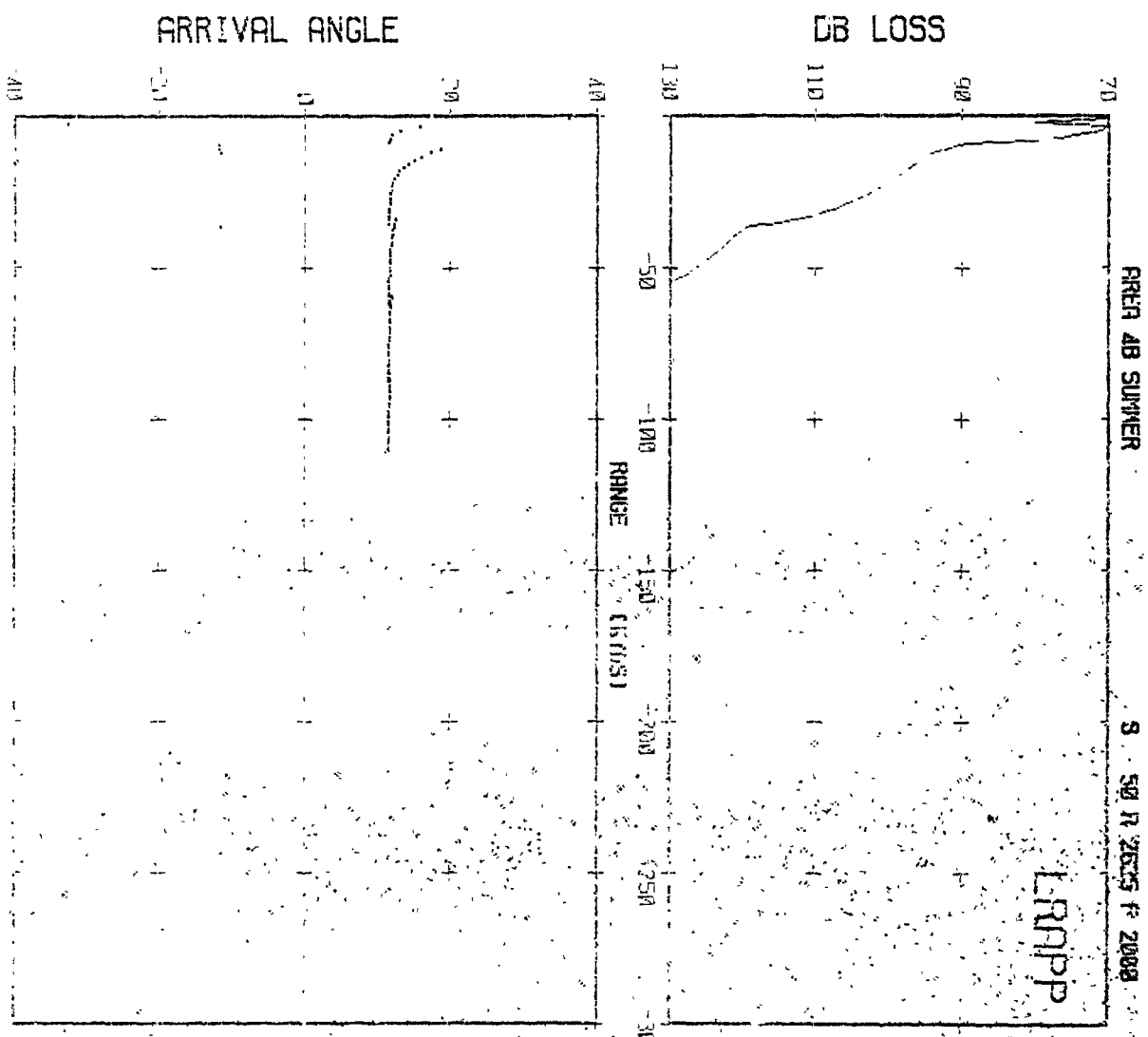
DB LOSS (DB)



ARRIVAL ANGLE (DB)



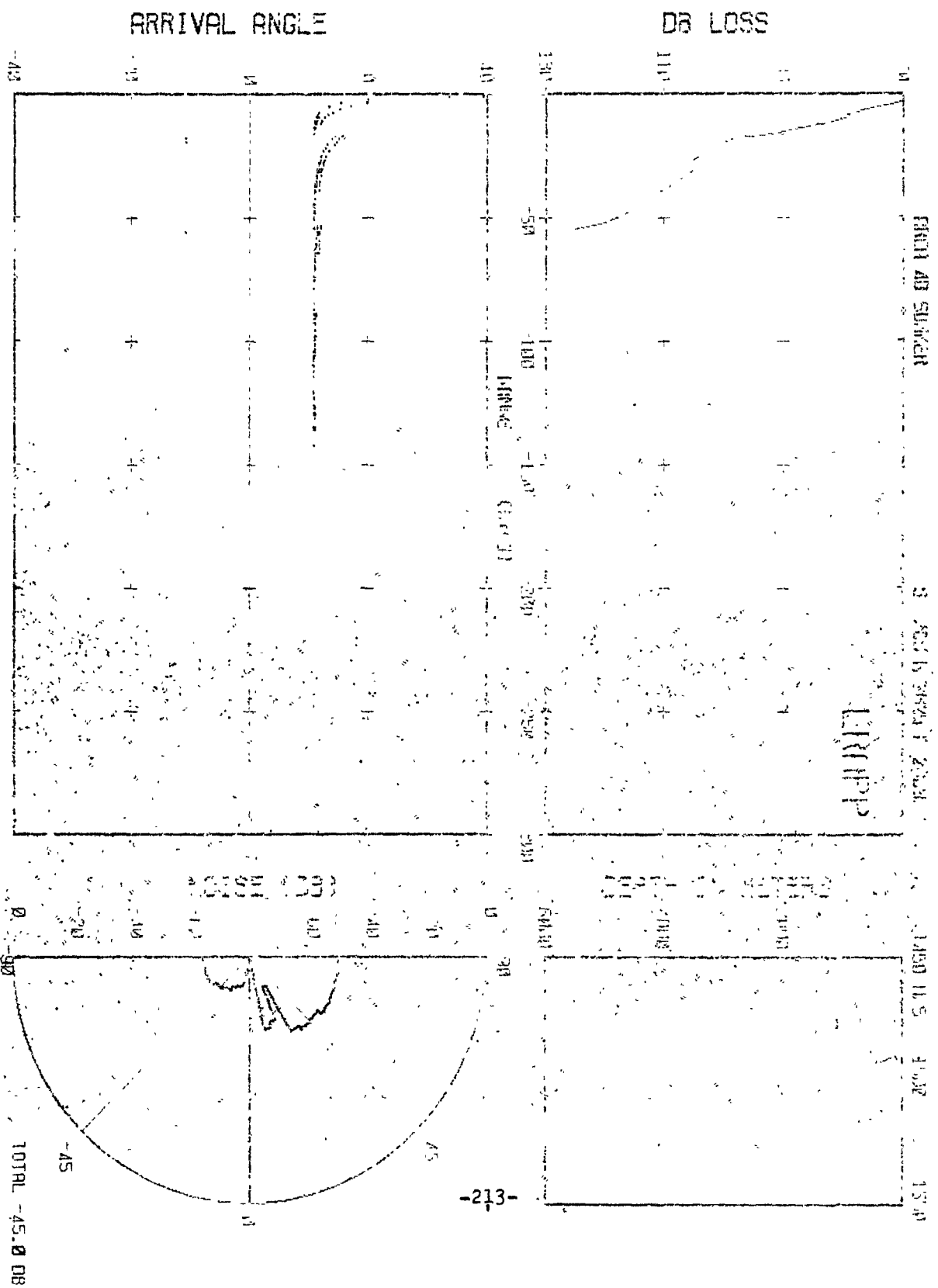
TOTAL -45.0 DB

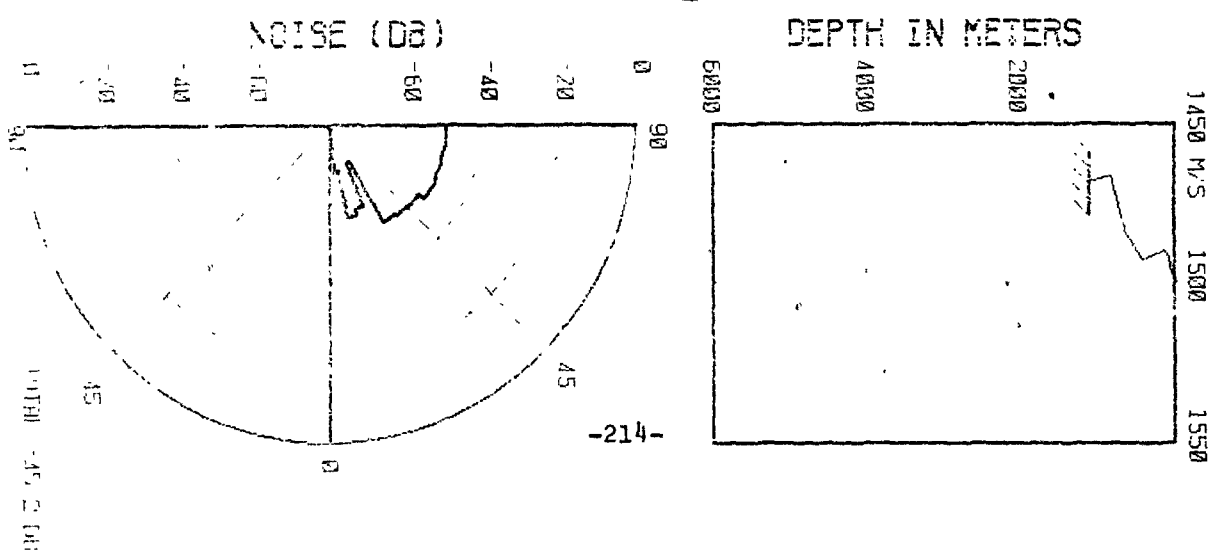
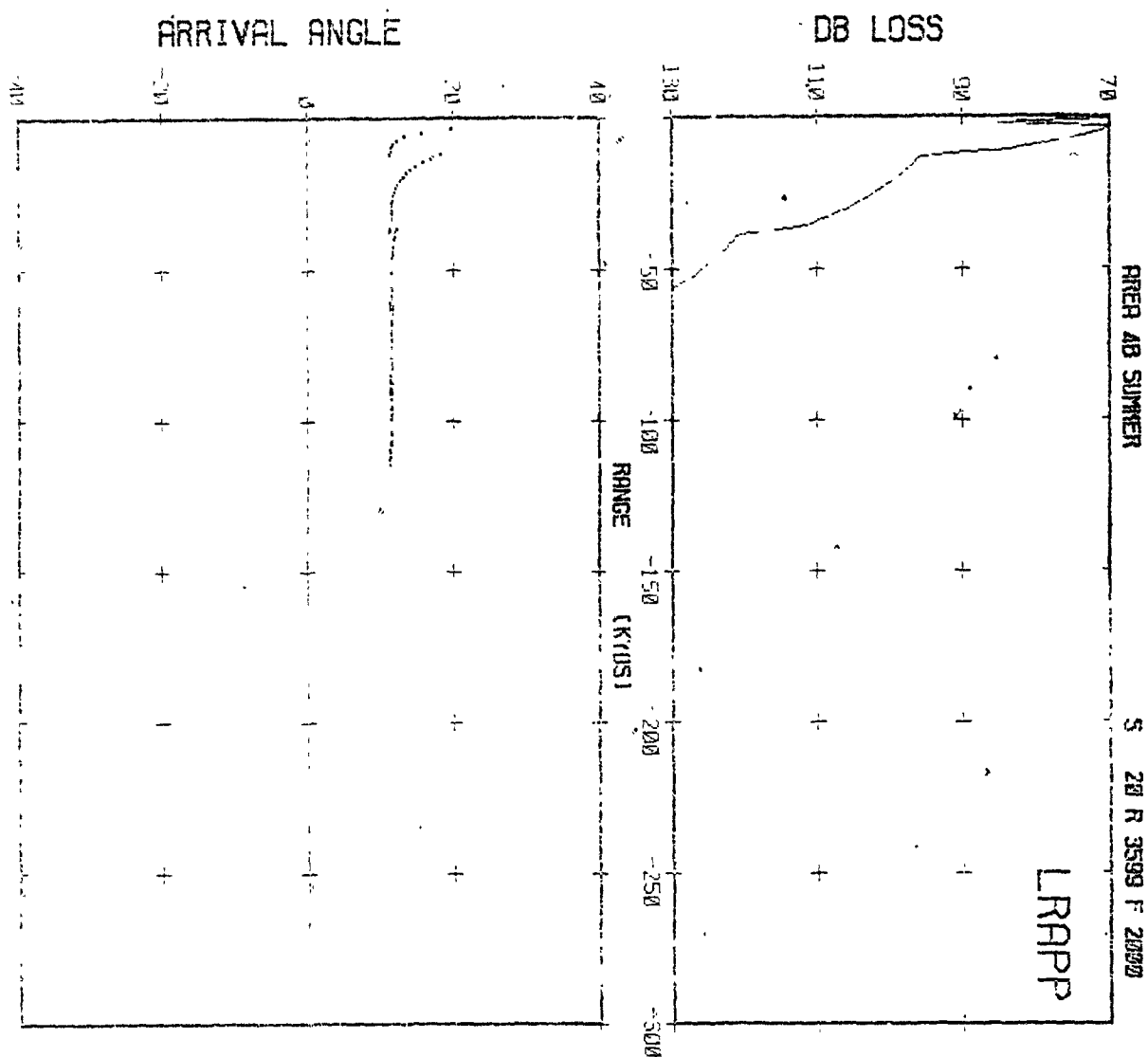


RRR AB SUMMER

S 50 R 2000

1550 M/S 1500 1550

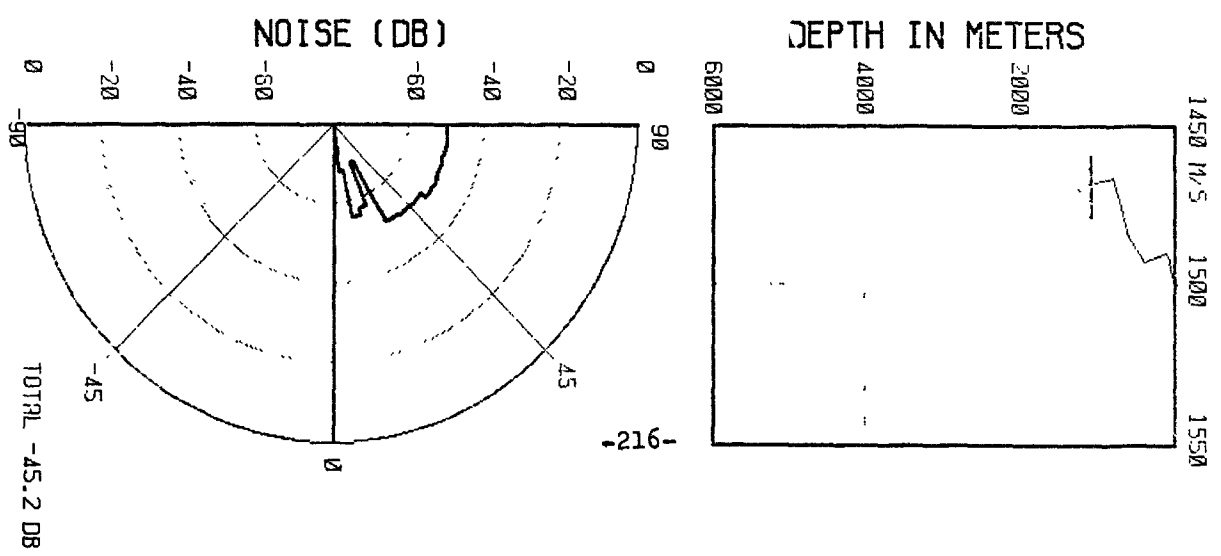
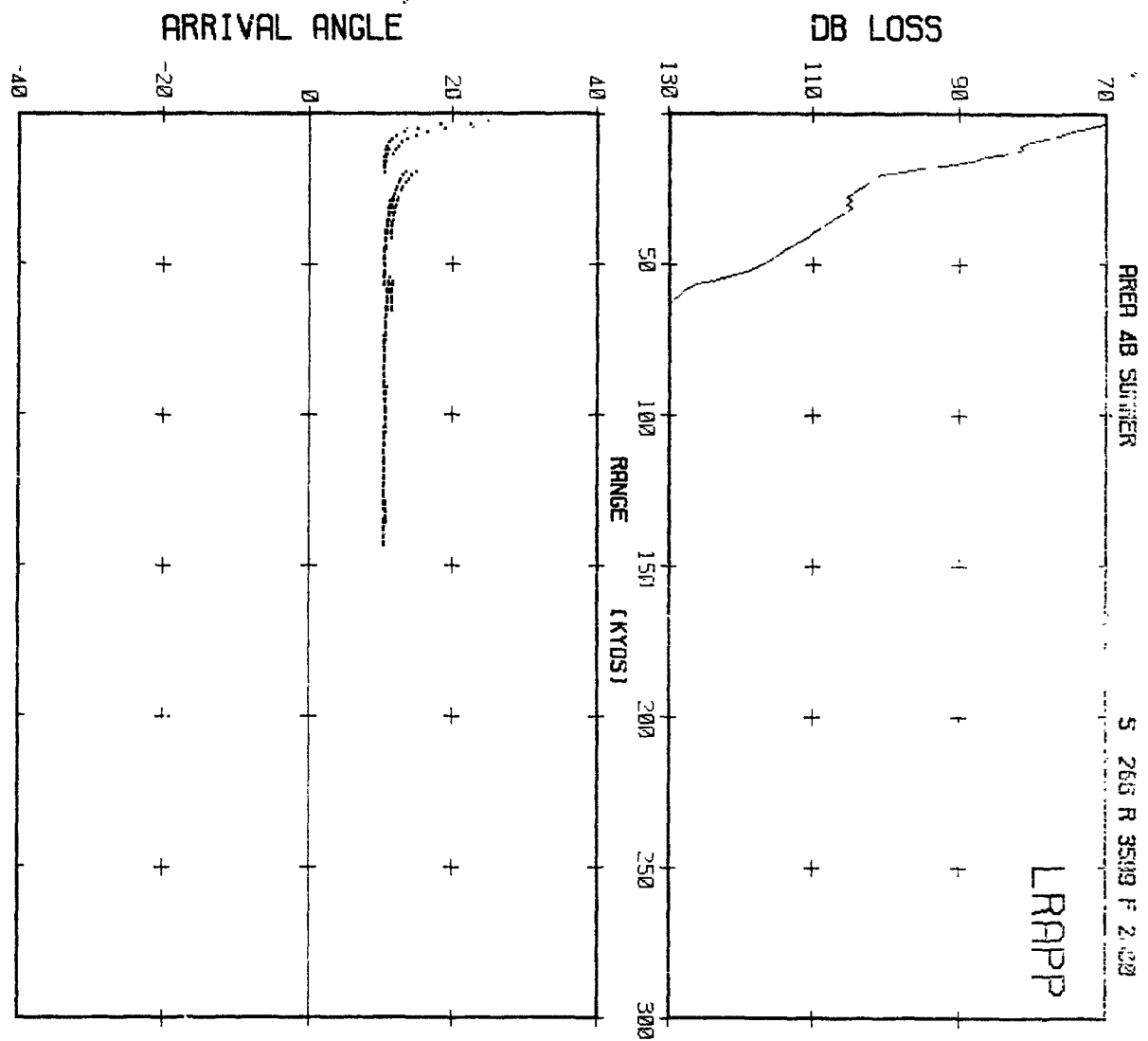


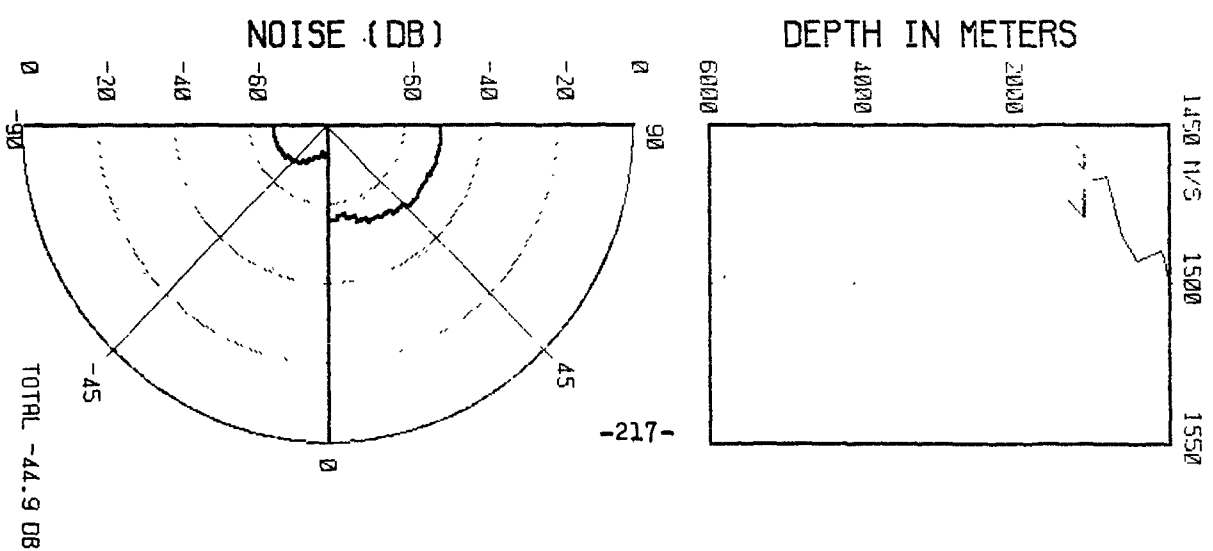
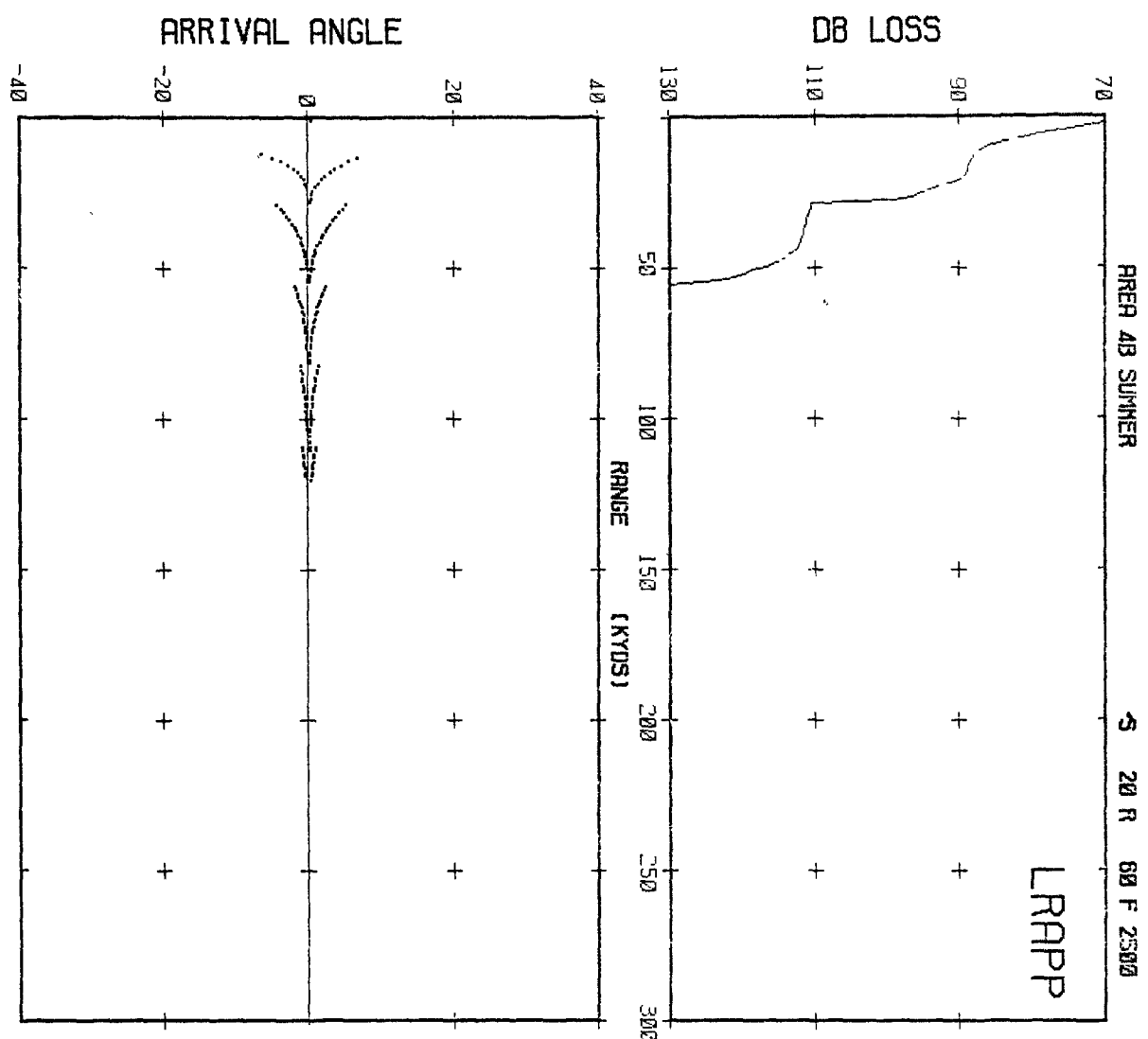


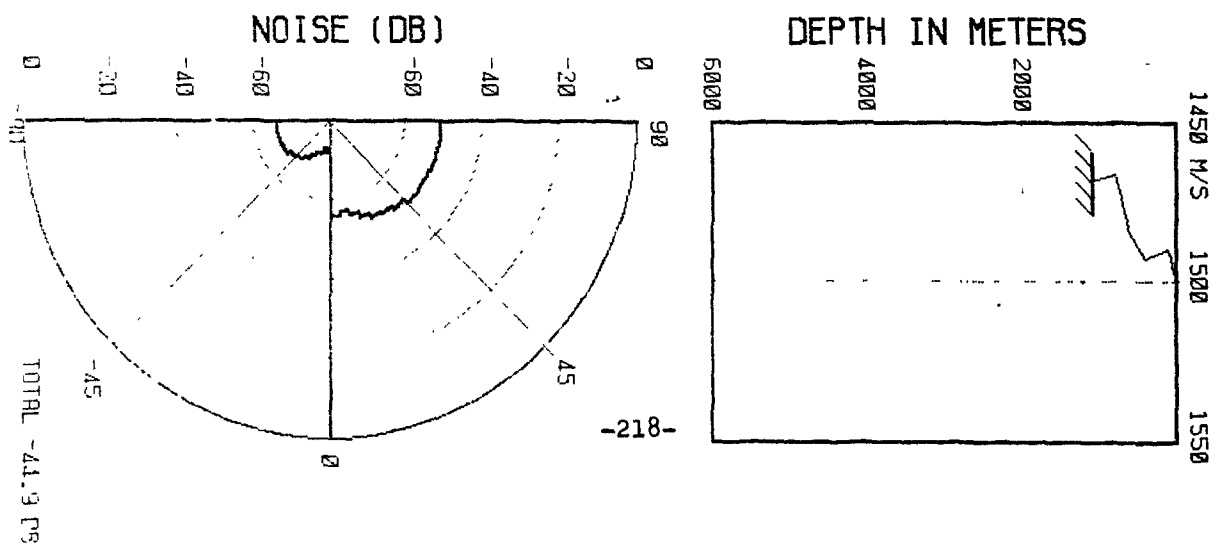
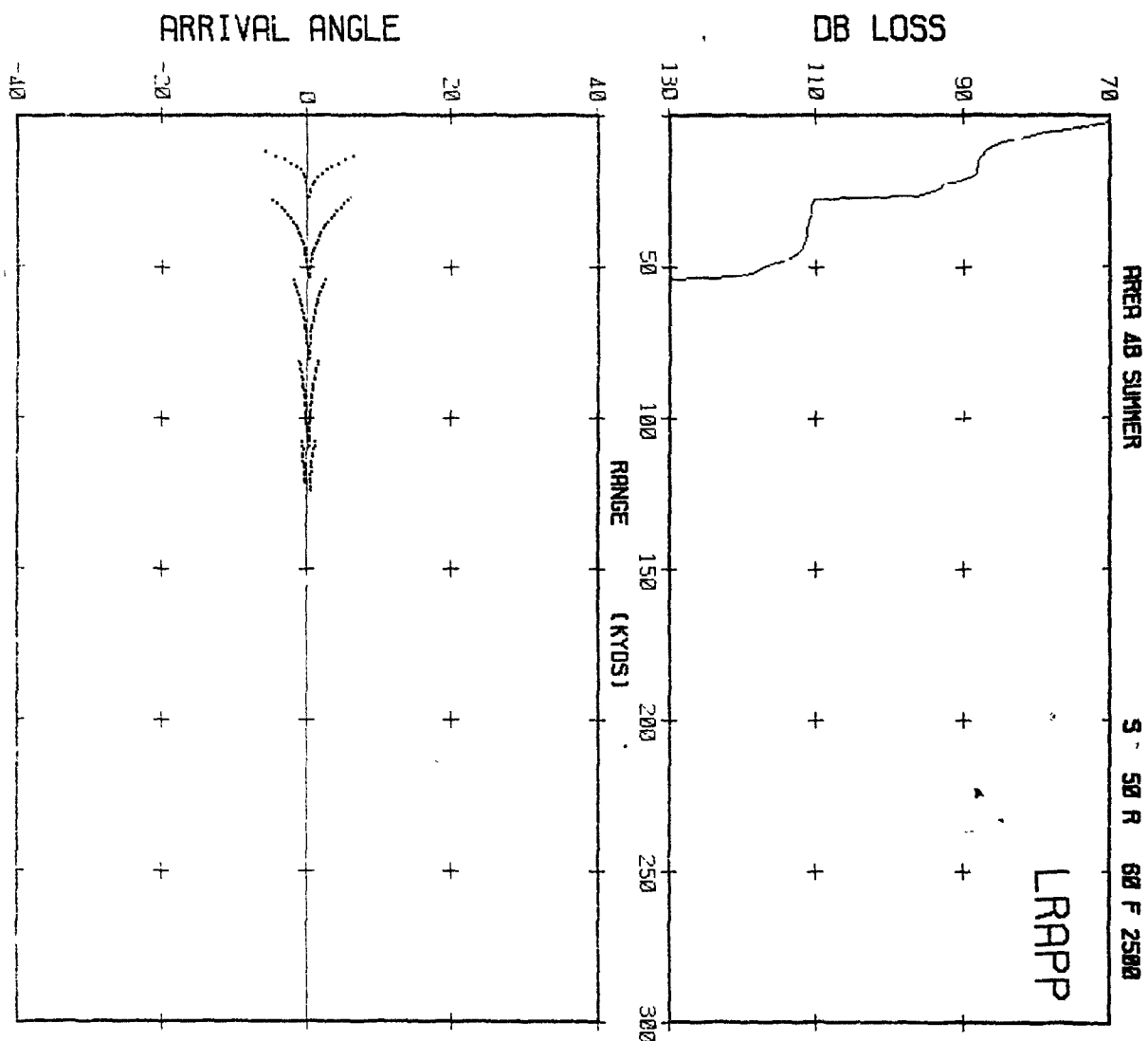
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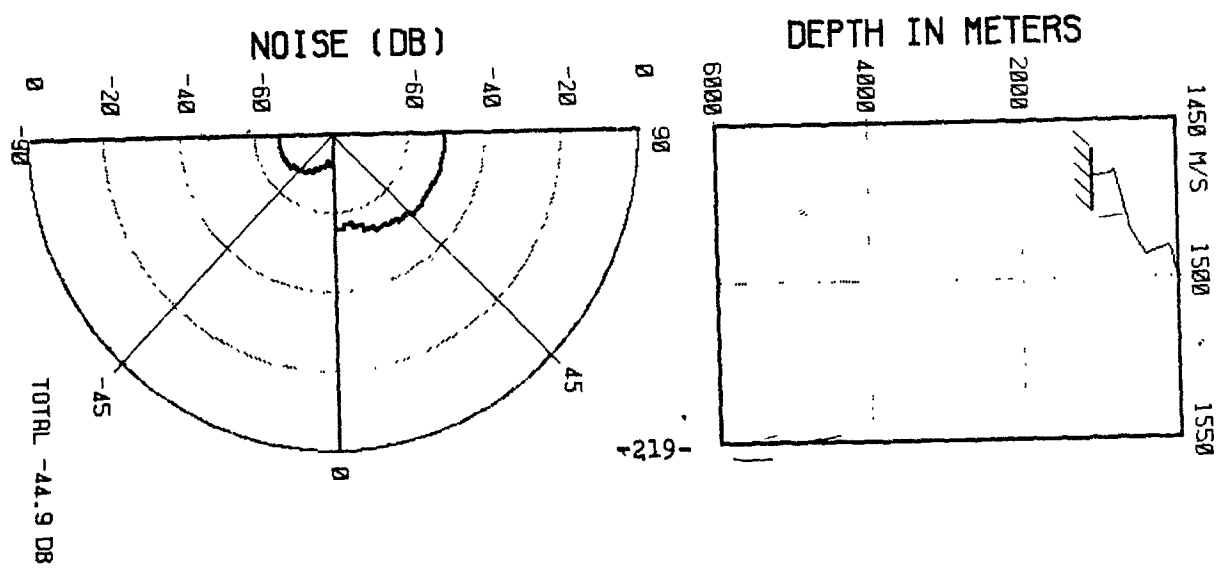
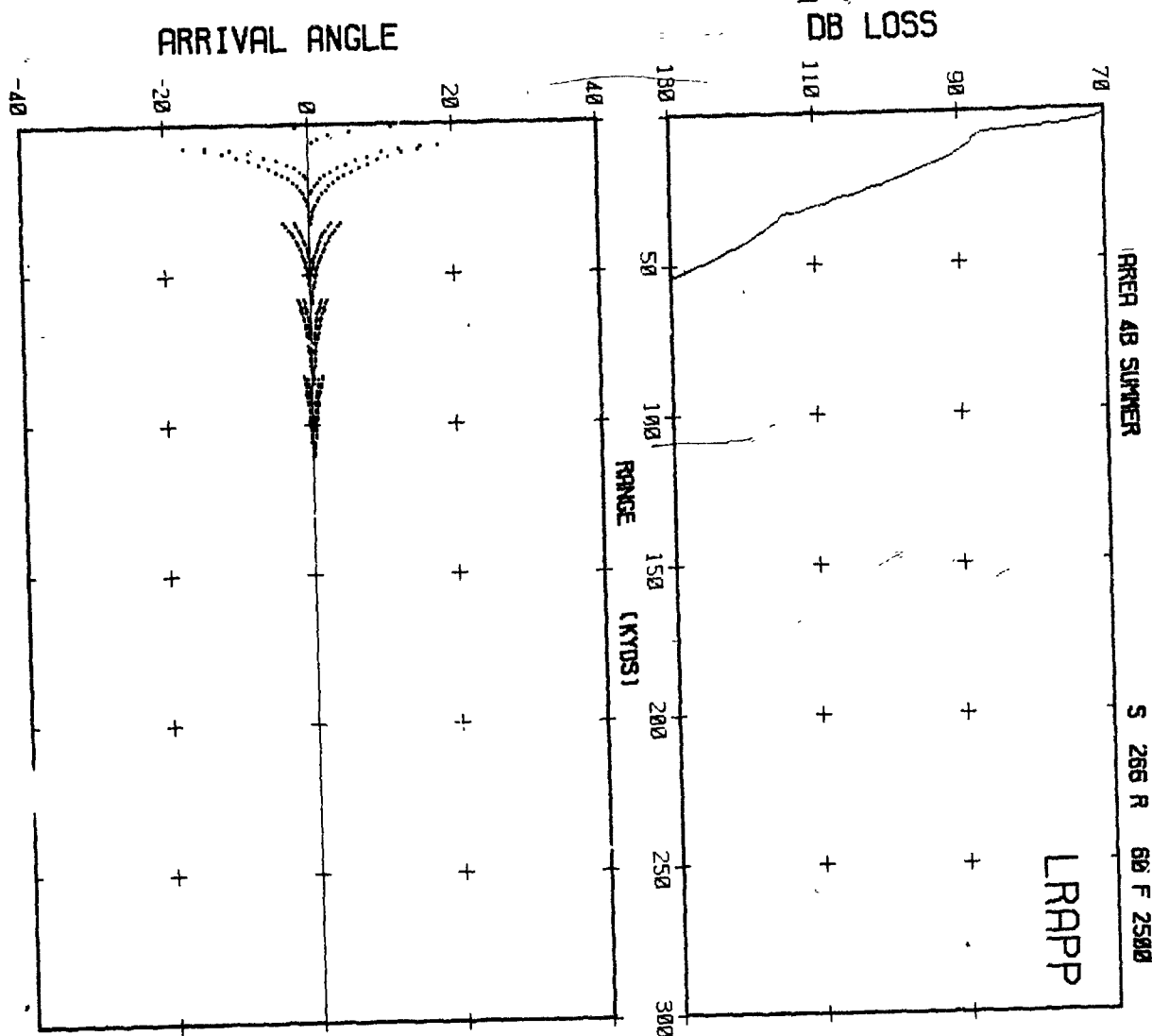
S 50 R 3539 F 2000

711701-41-2 US







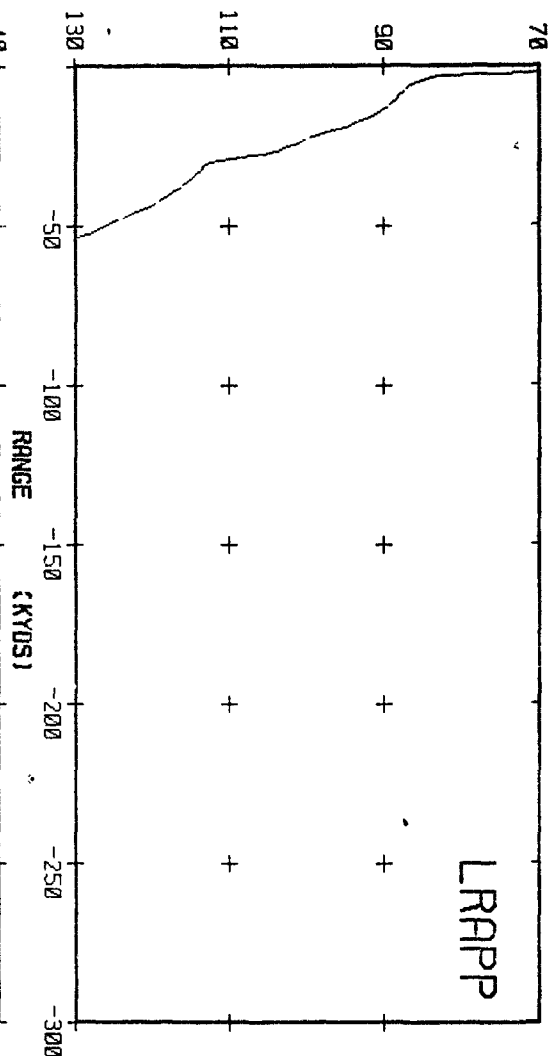


ARRER AB SUMMER

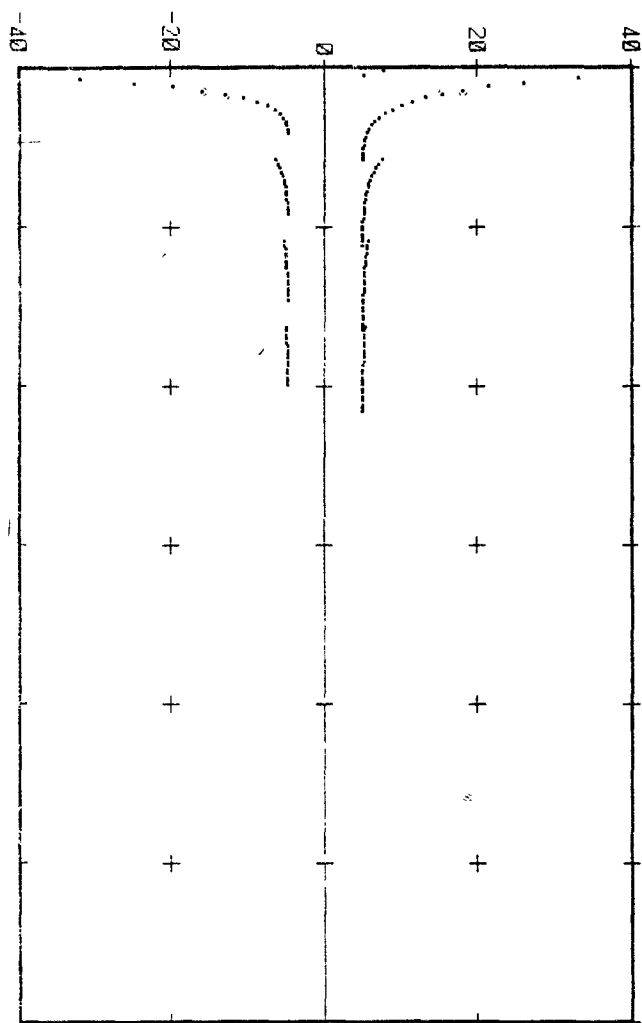
S 20 R 186 F 2500

LRAPP

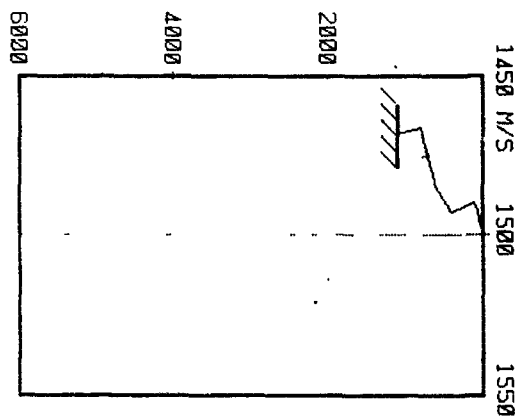
DB LOSS



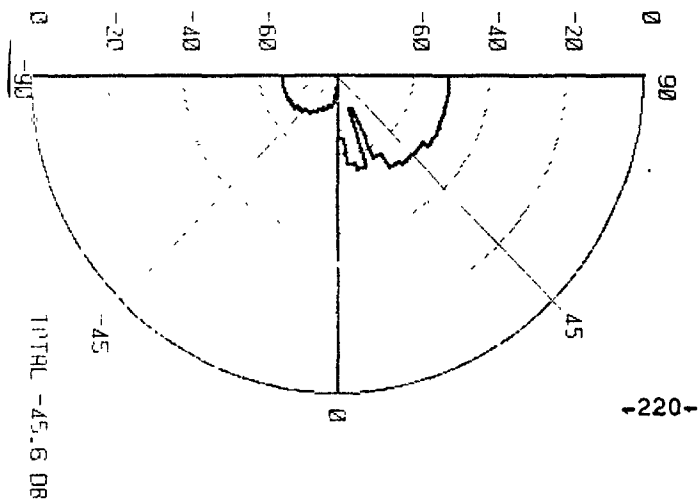
ARRIVAL ANGLE

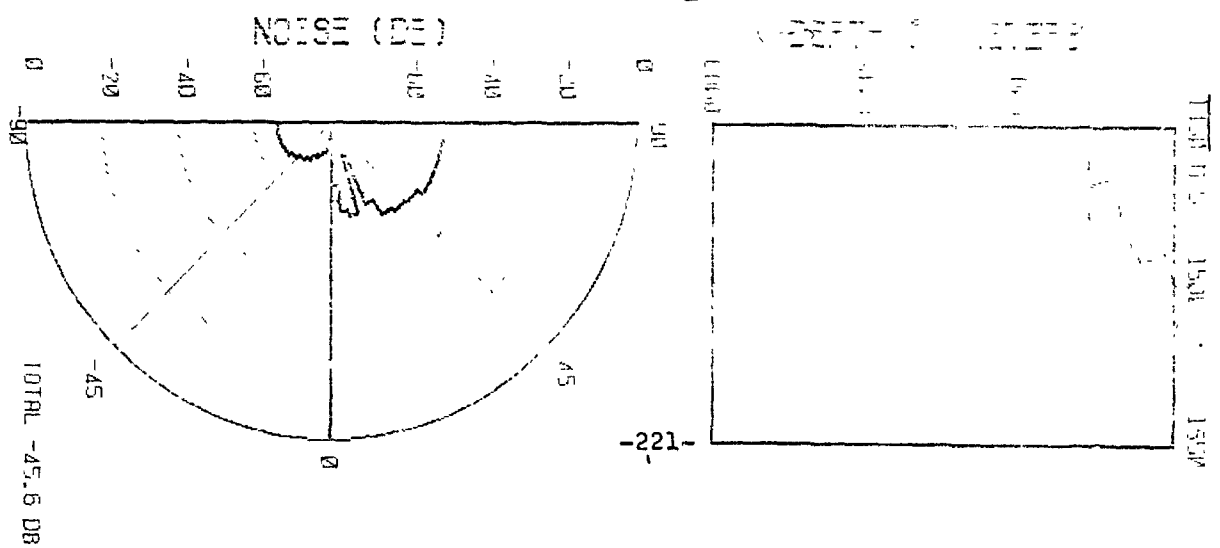
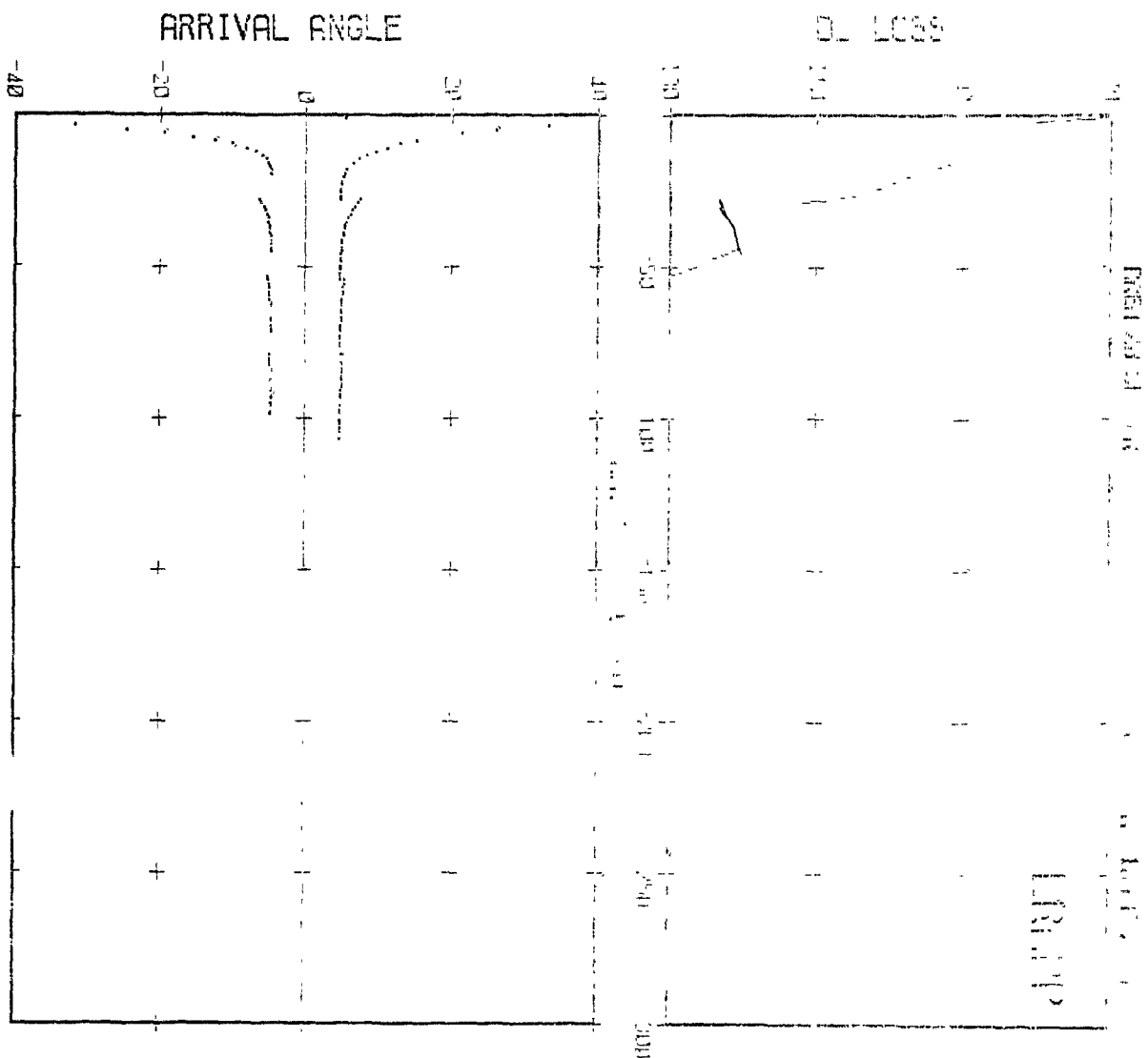


DEPTH IN METERS



NOISE (DB)



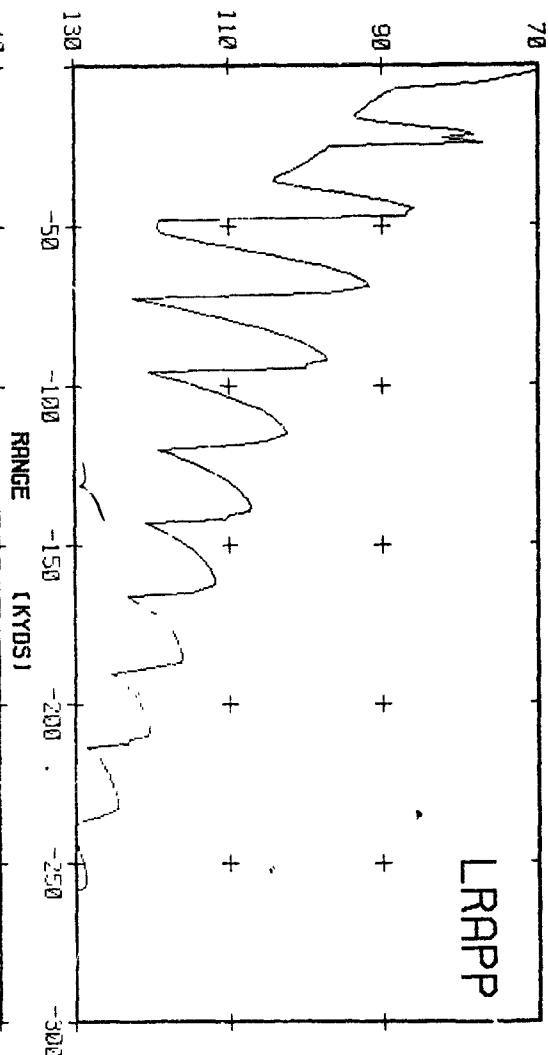


AREA 4B SUMMER

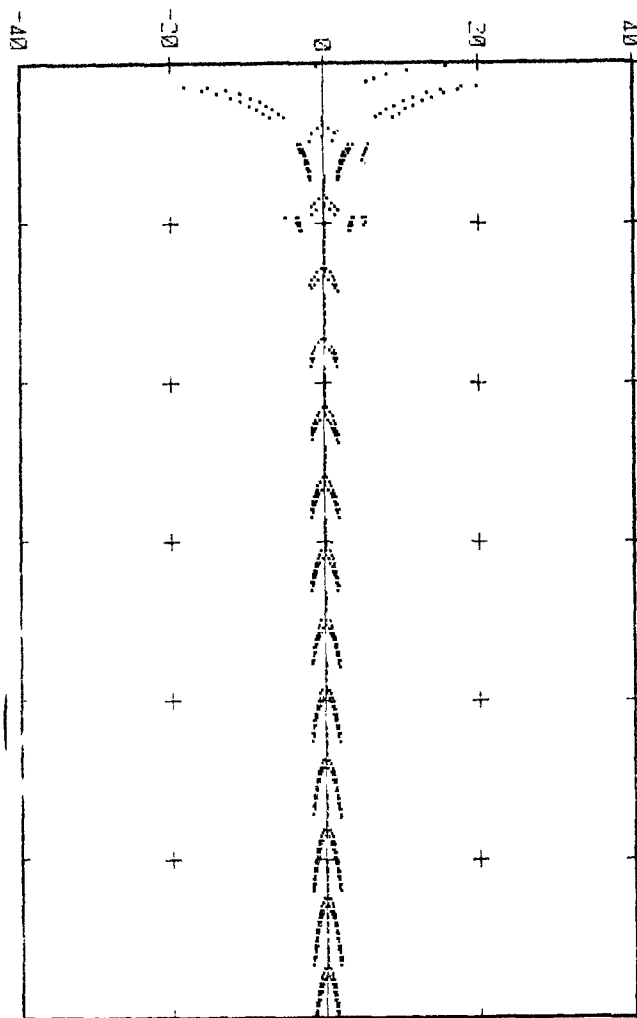
S 268 R 166 F 2500

LRAPP

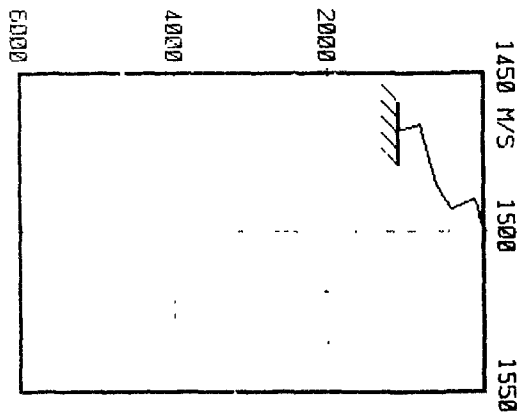
DB LOSS



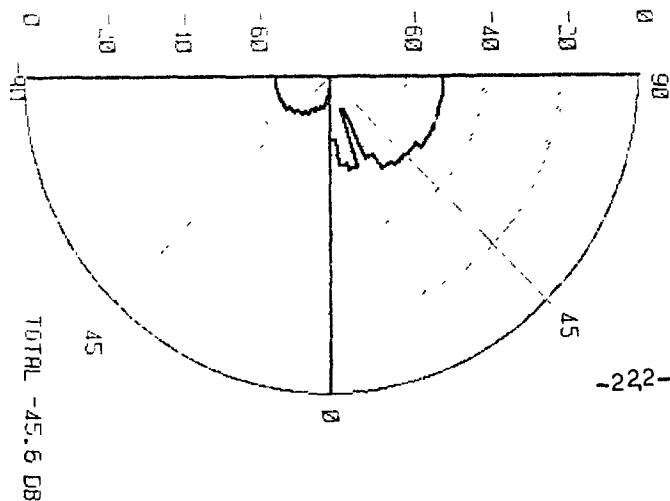
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



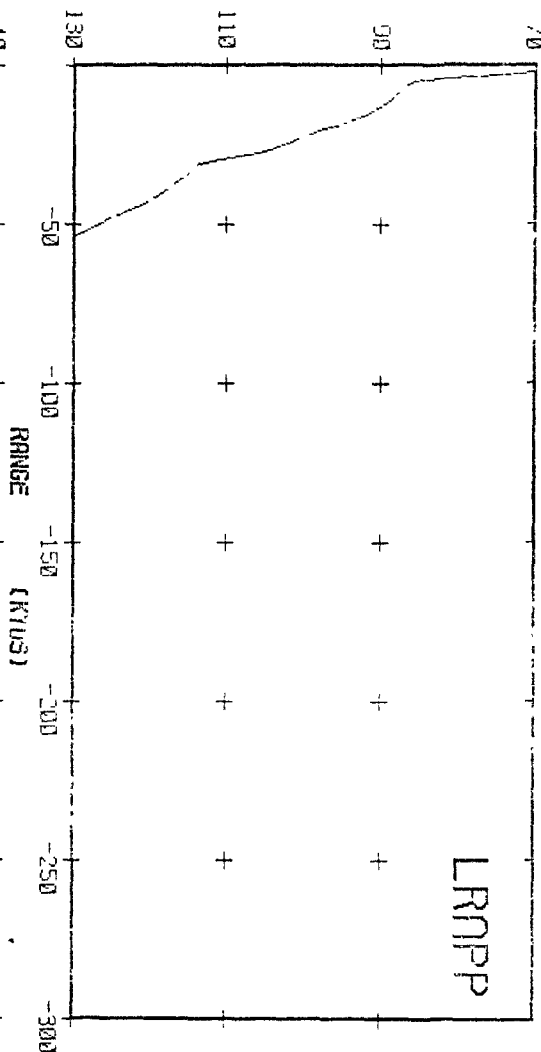
-222-

GREEN AB SUMMER

S 20 R 300 F 2500

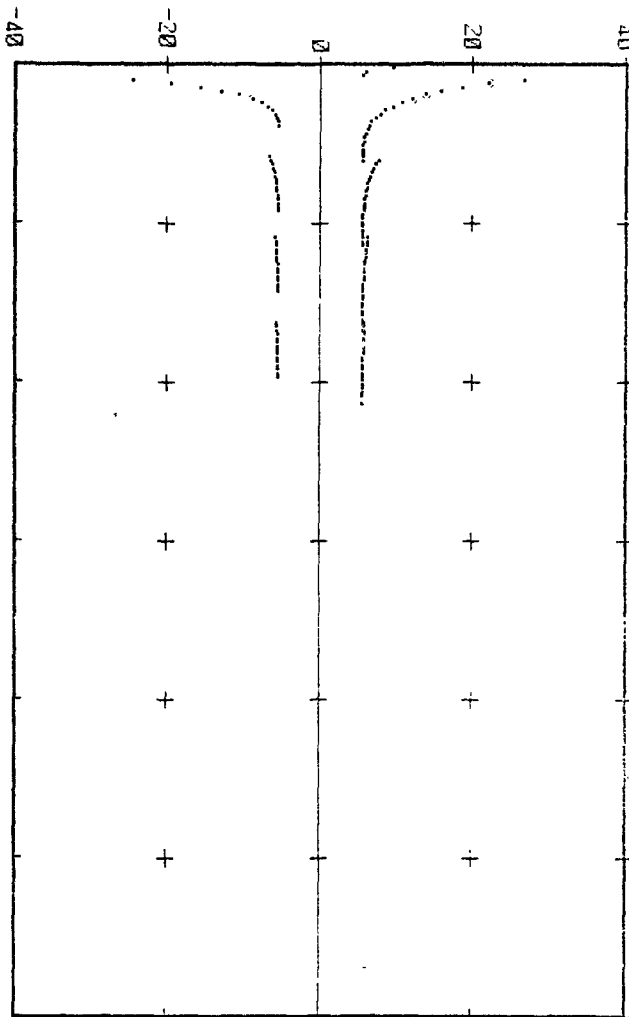
1450 M/S 1500 1550

DB LOSS

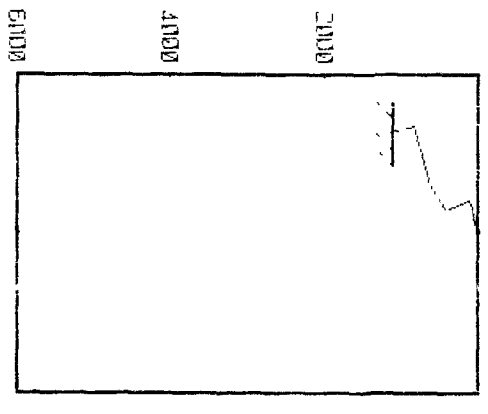


LRNPP

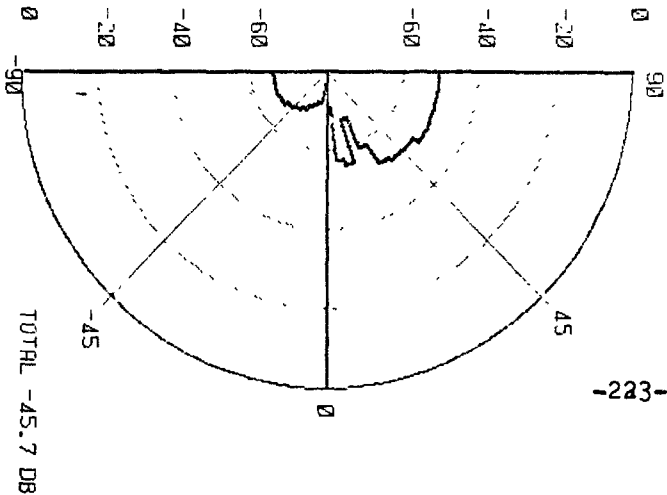
ARRIVAL ANGLE



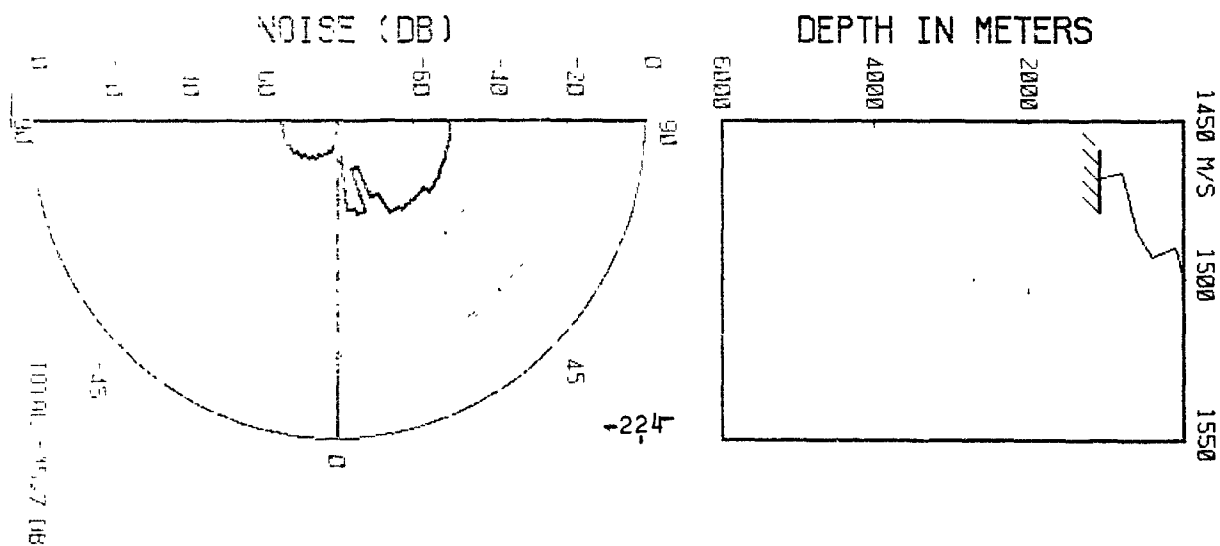
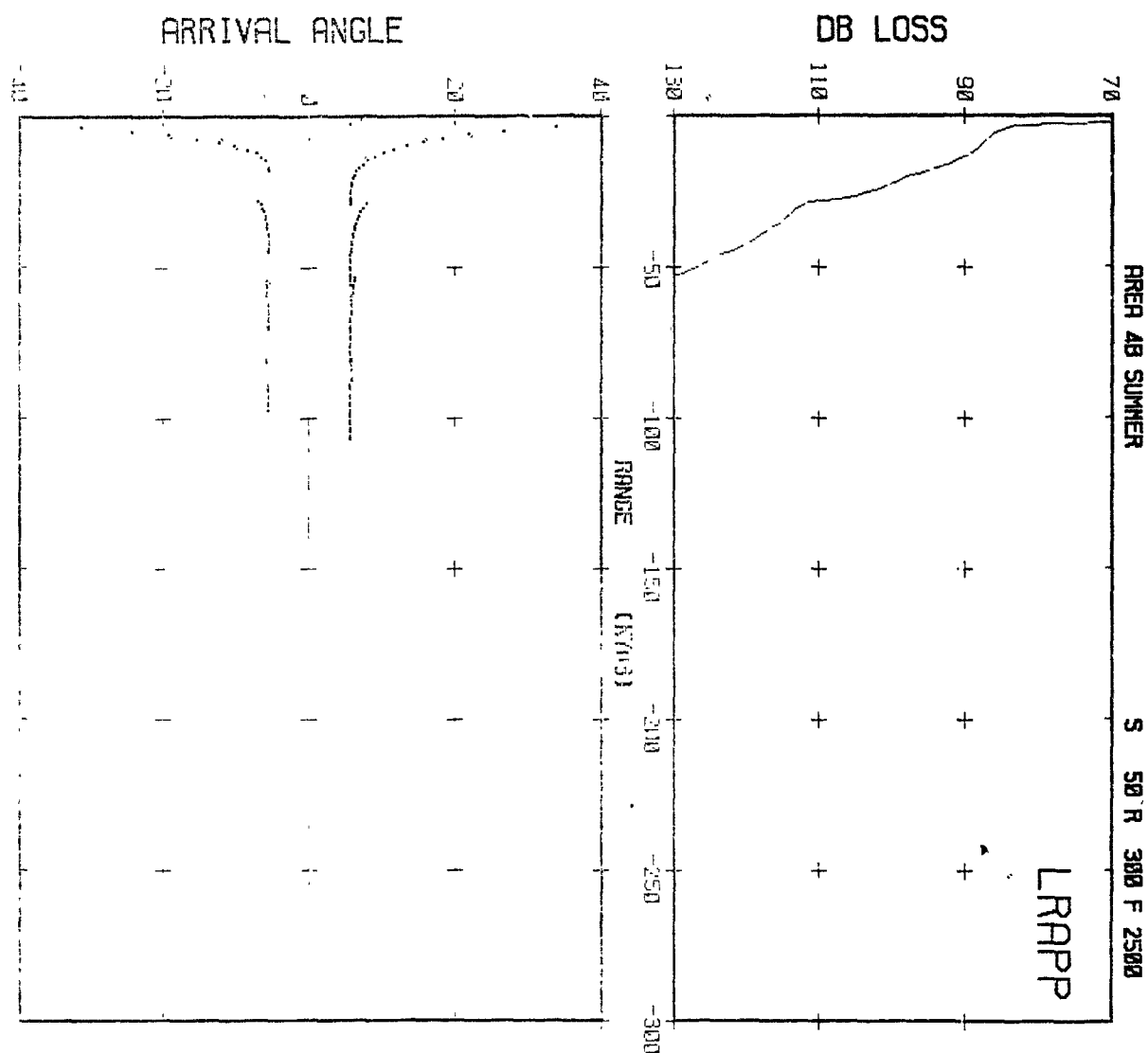
DEPTH IN METERS

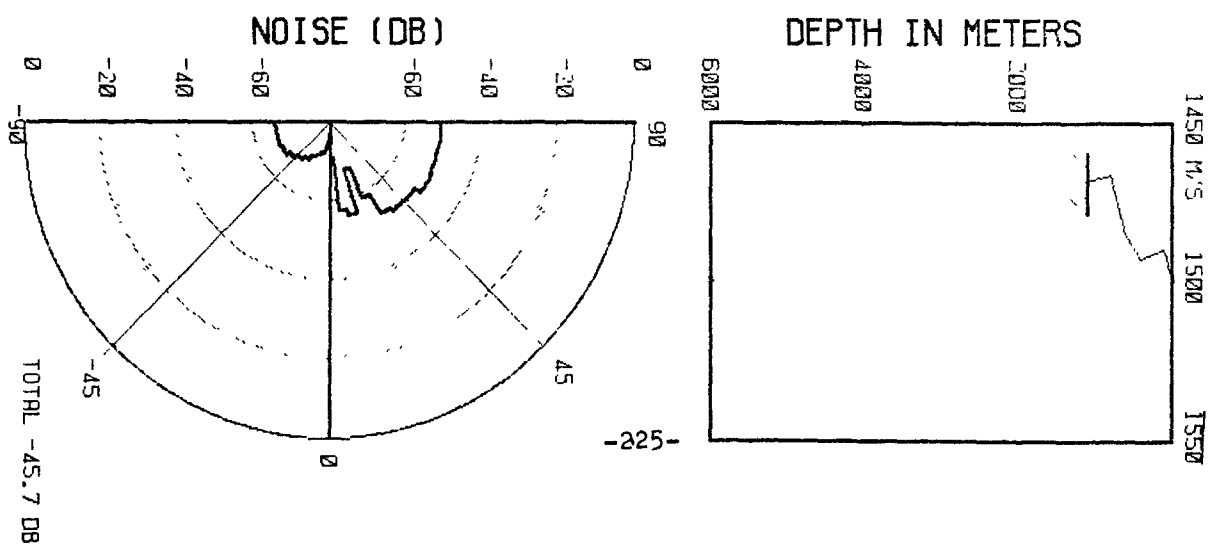
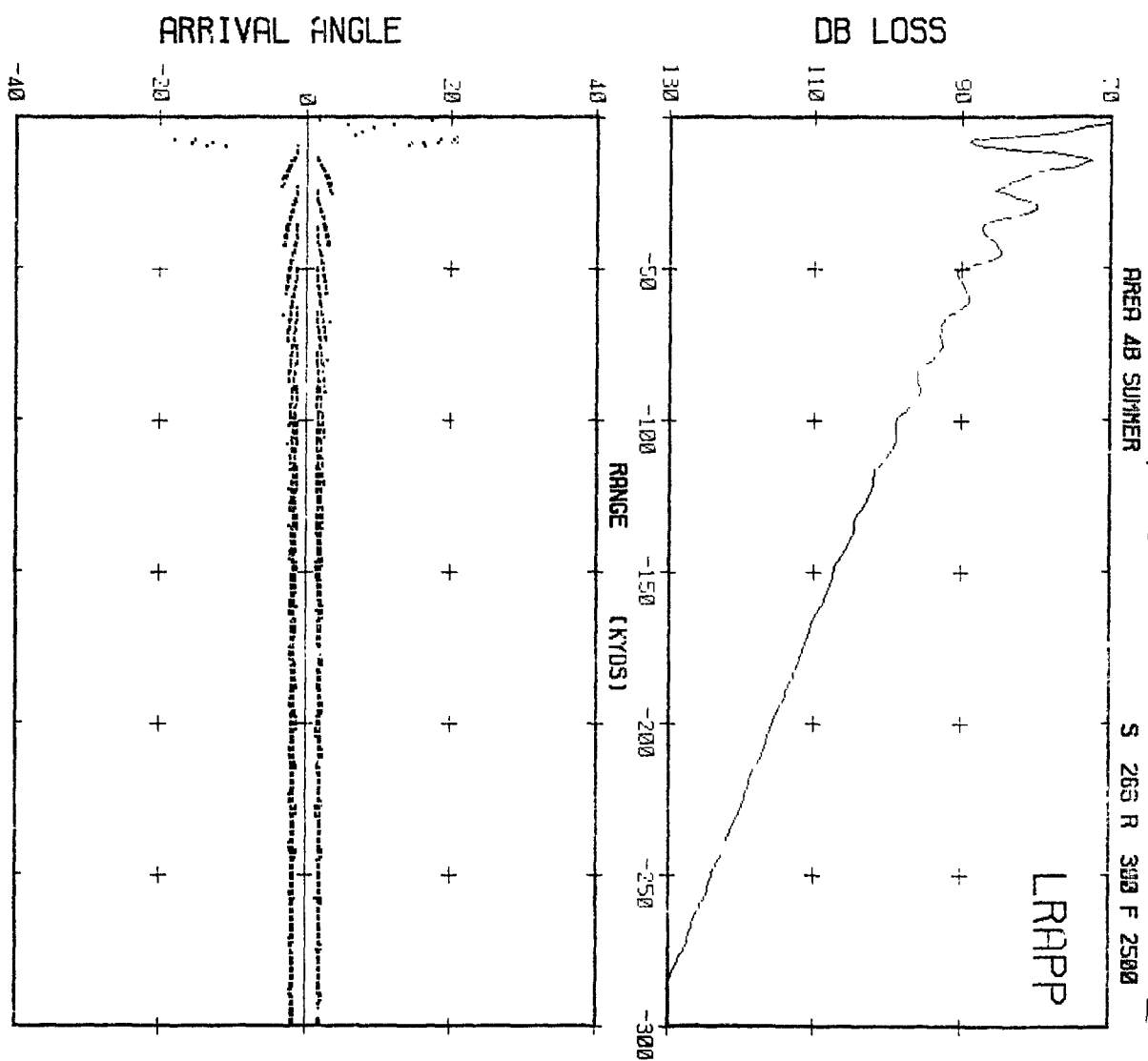


NOISE (DB)



TOTAL -45.7 DB





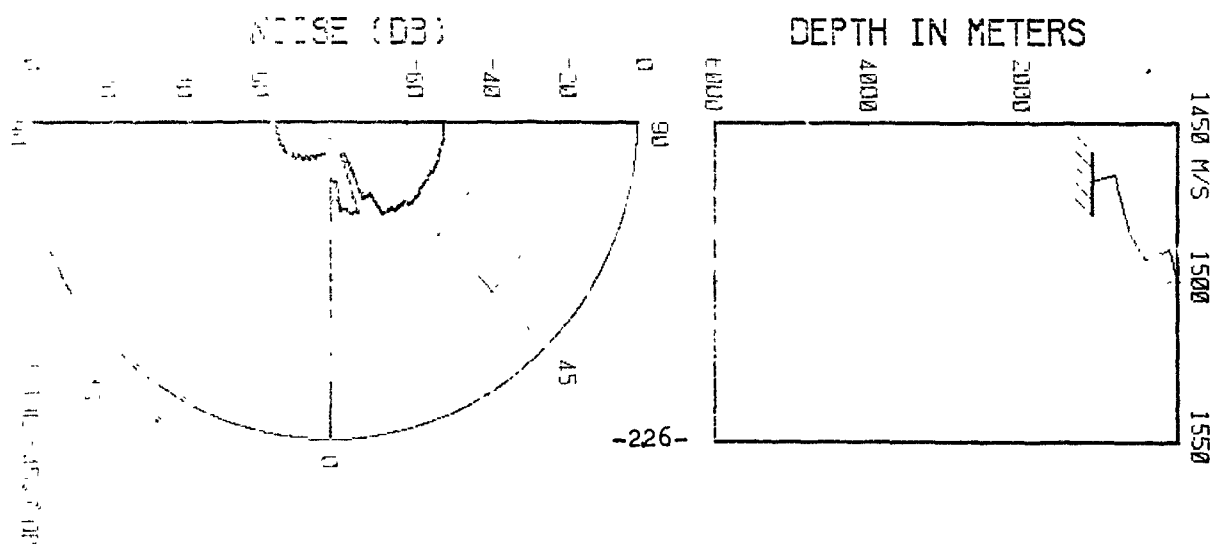
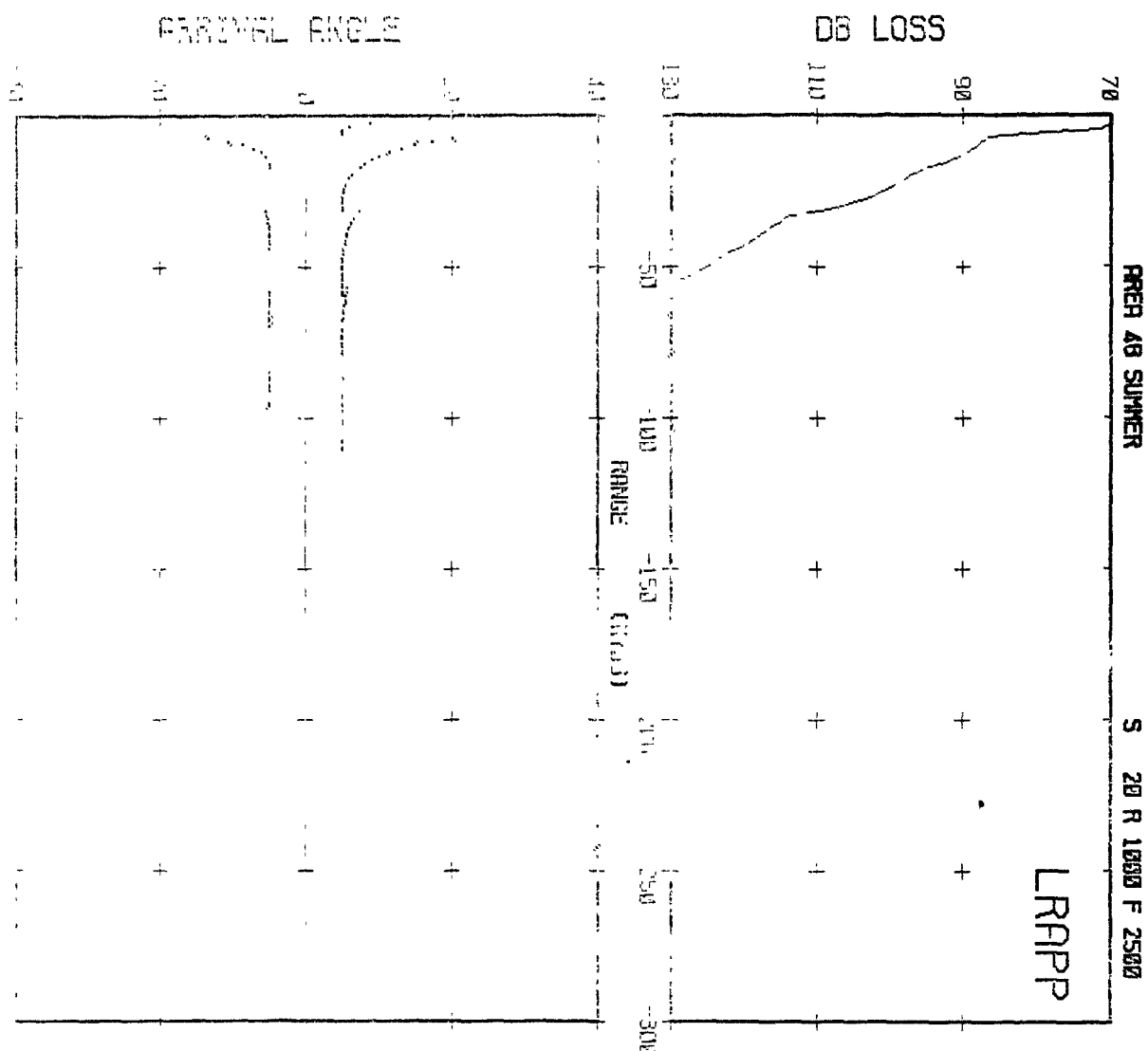
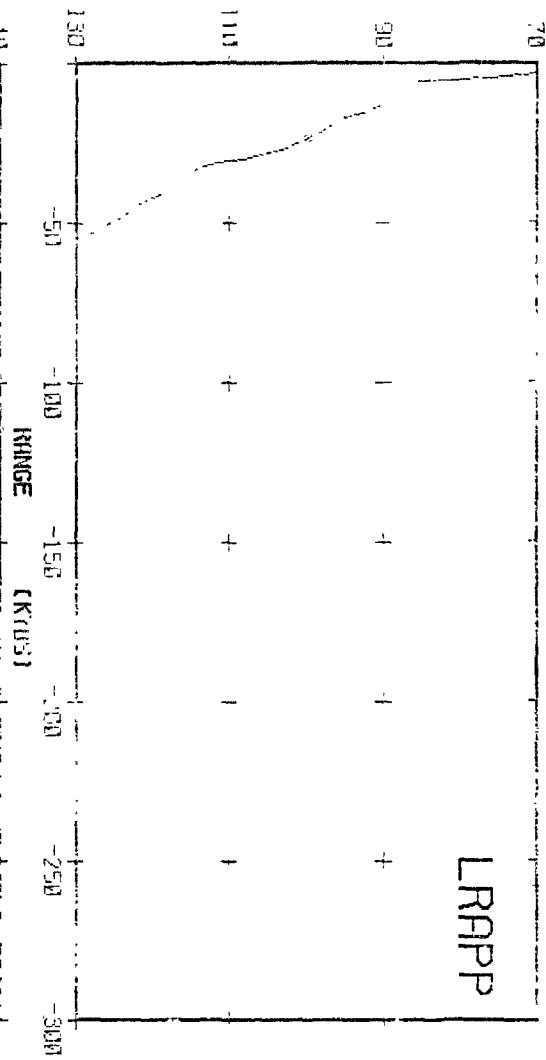


FIGURE 4.3 - LRP

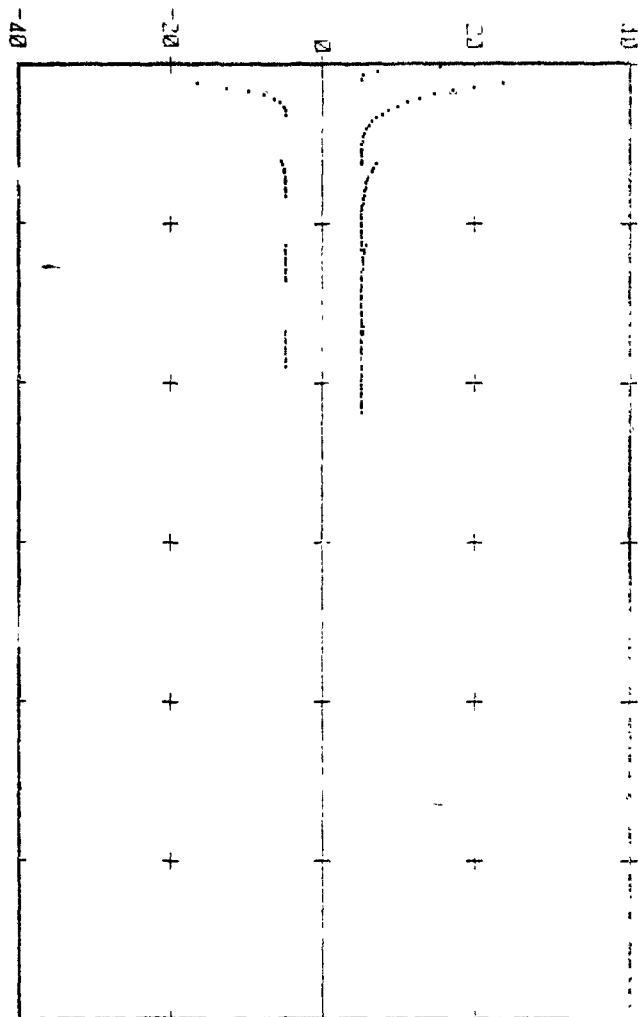
S 50 R 100 F 2500

1450 11.5 1500 1550

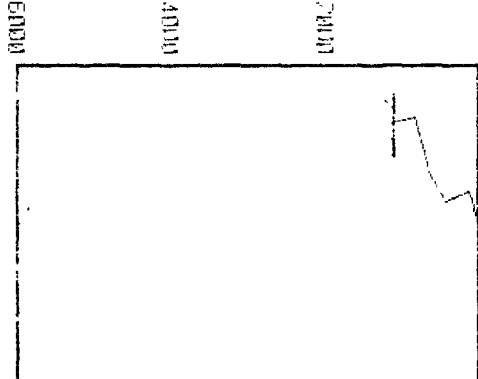
DB LOSS



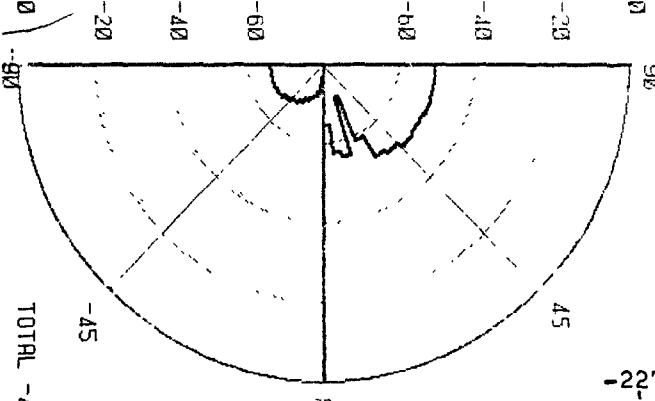
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



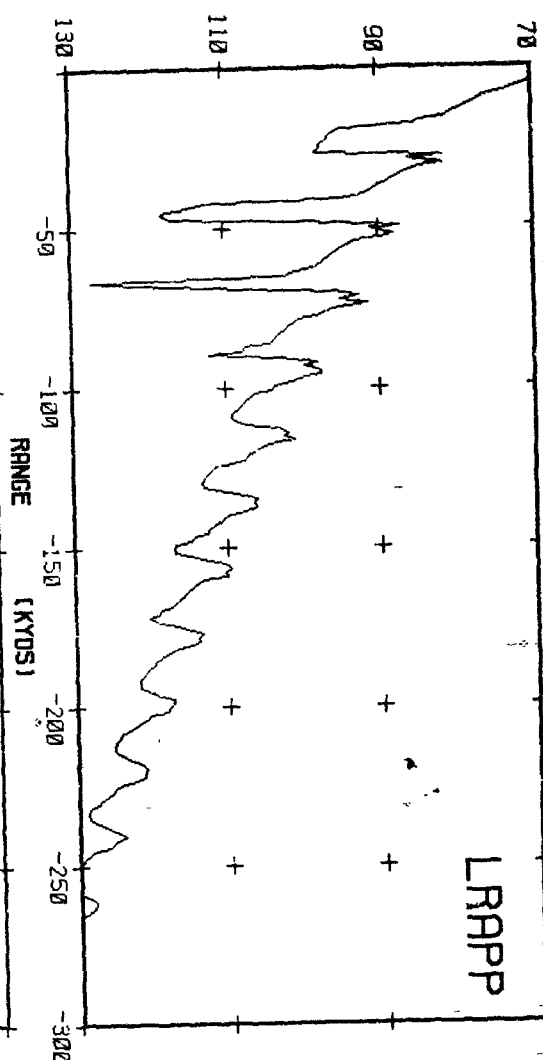
TOTAL -45.7 DB

AREA AB SLIVER

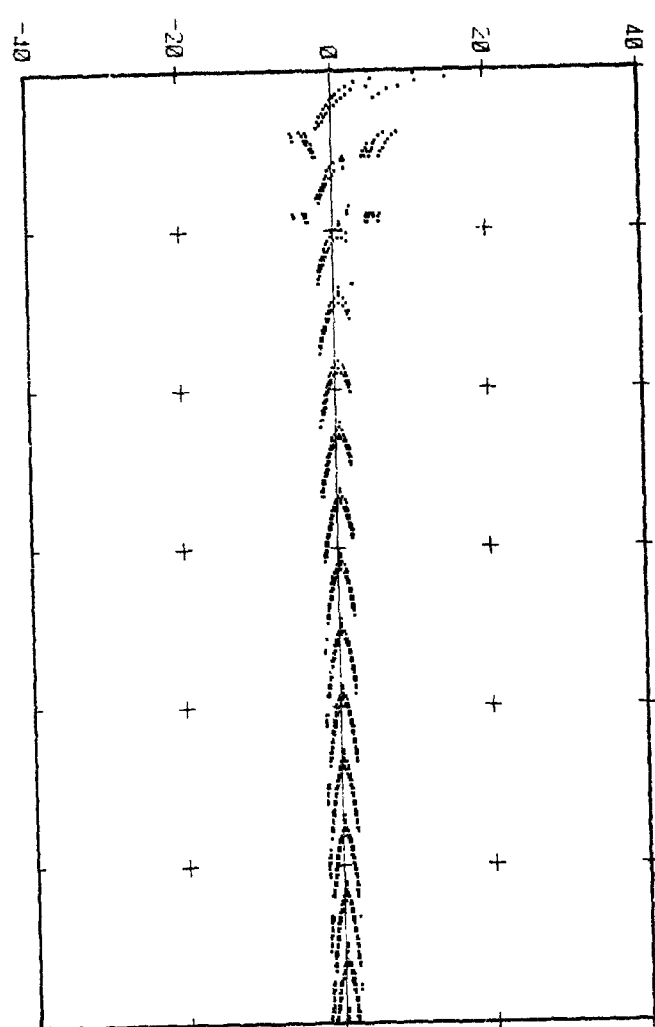
S 288 R 1000 F 2500

LRAPP

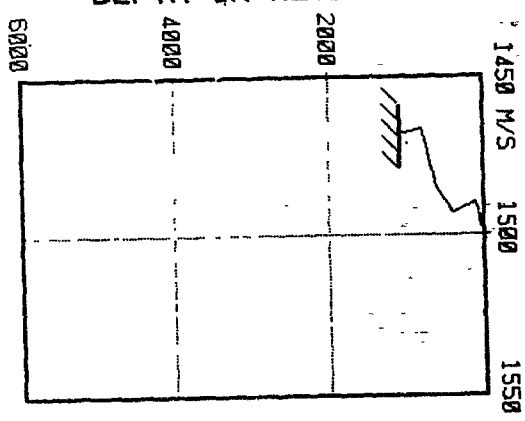
DB LOSS



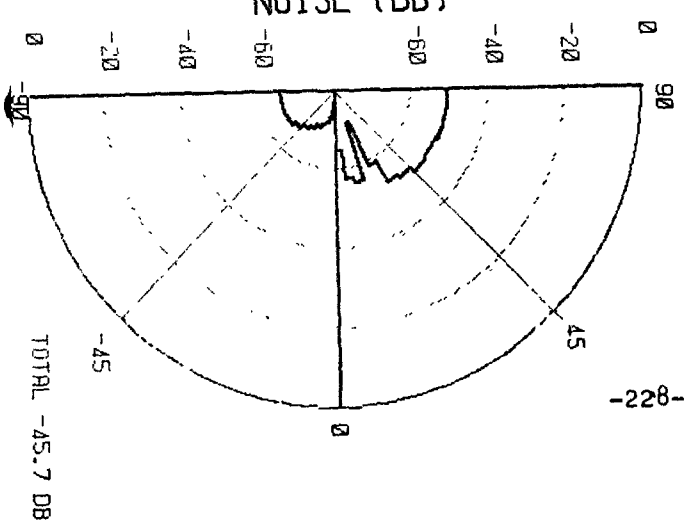
ARRIVAL ANGLE

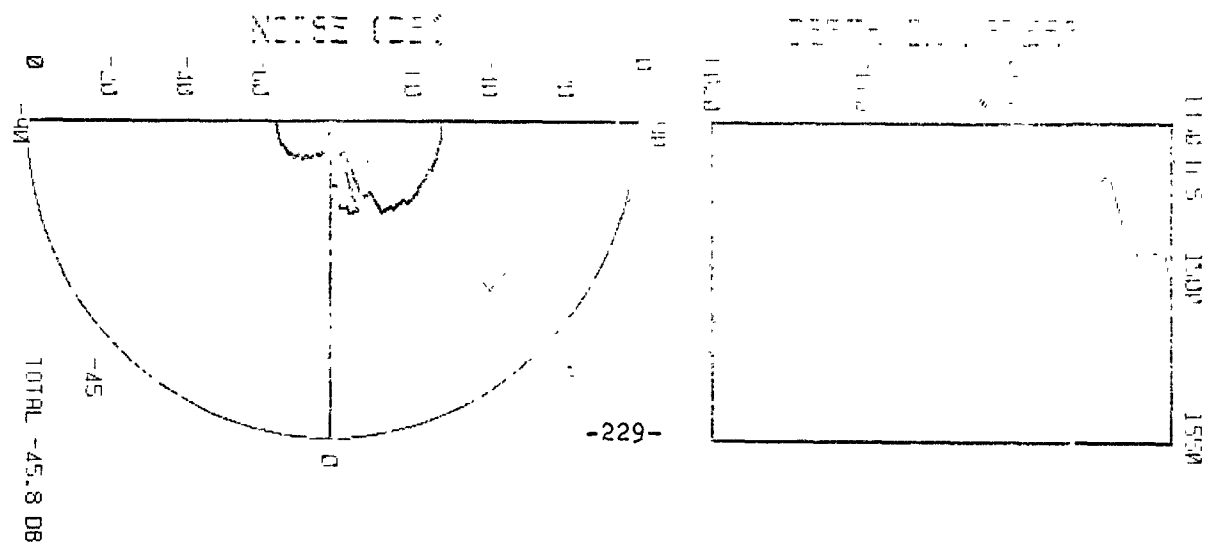
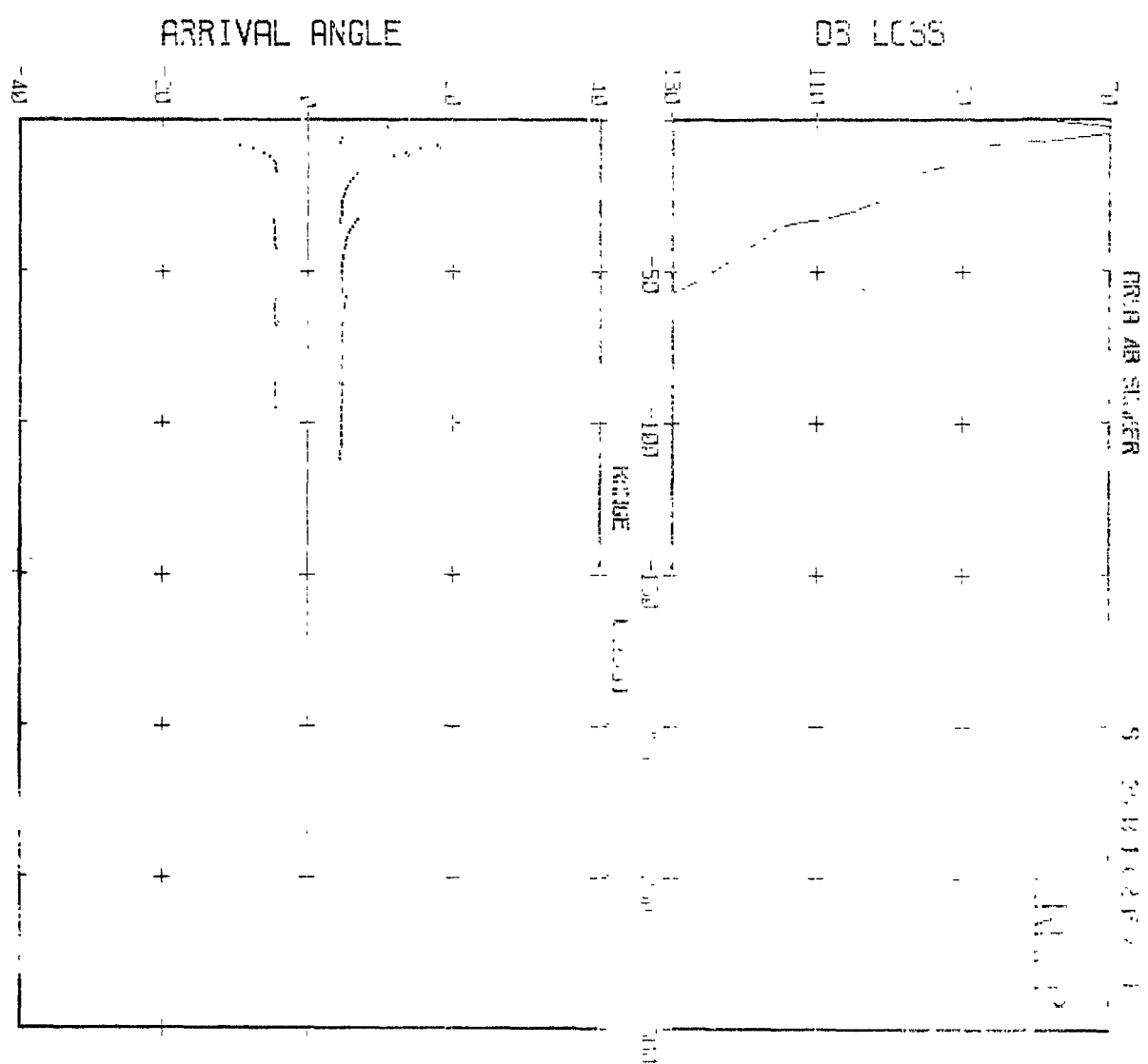


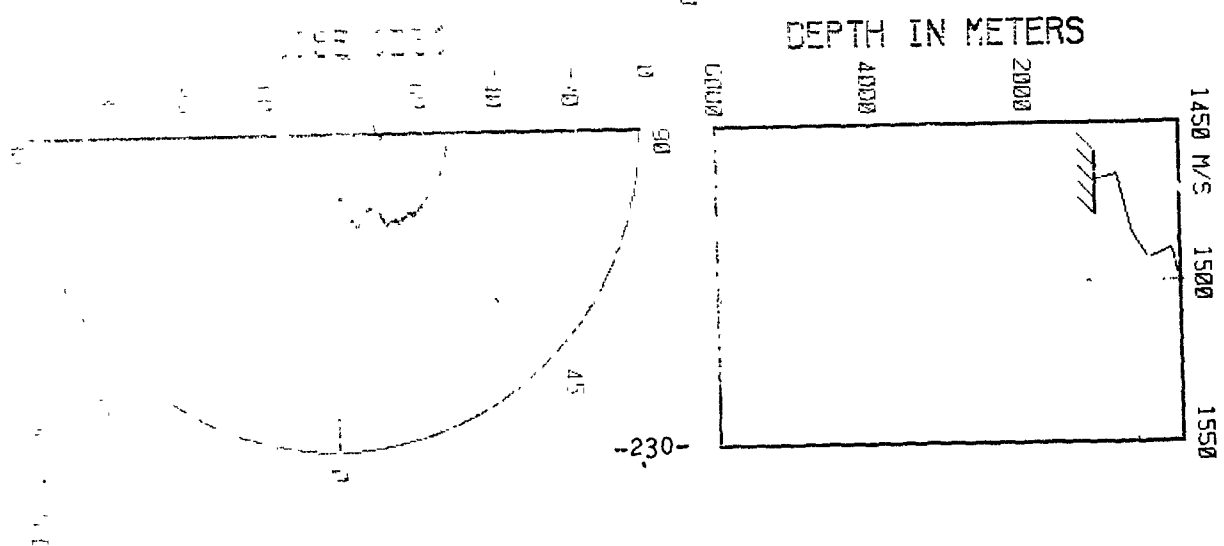
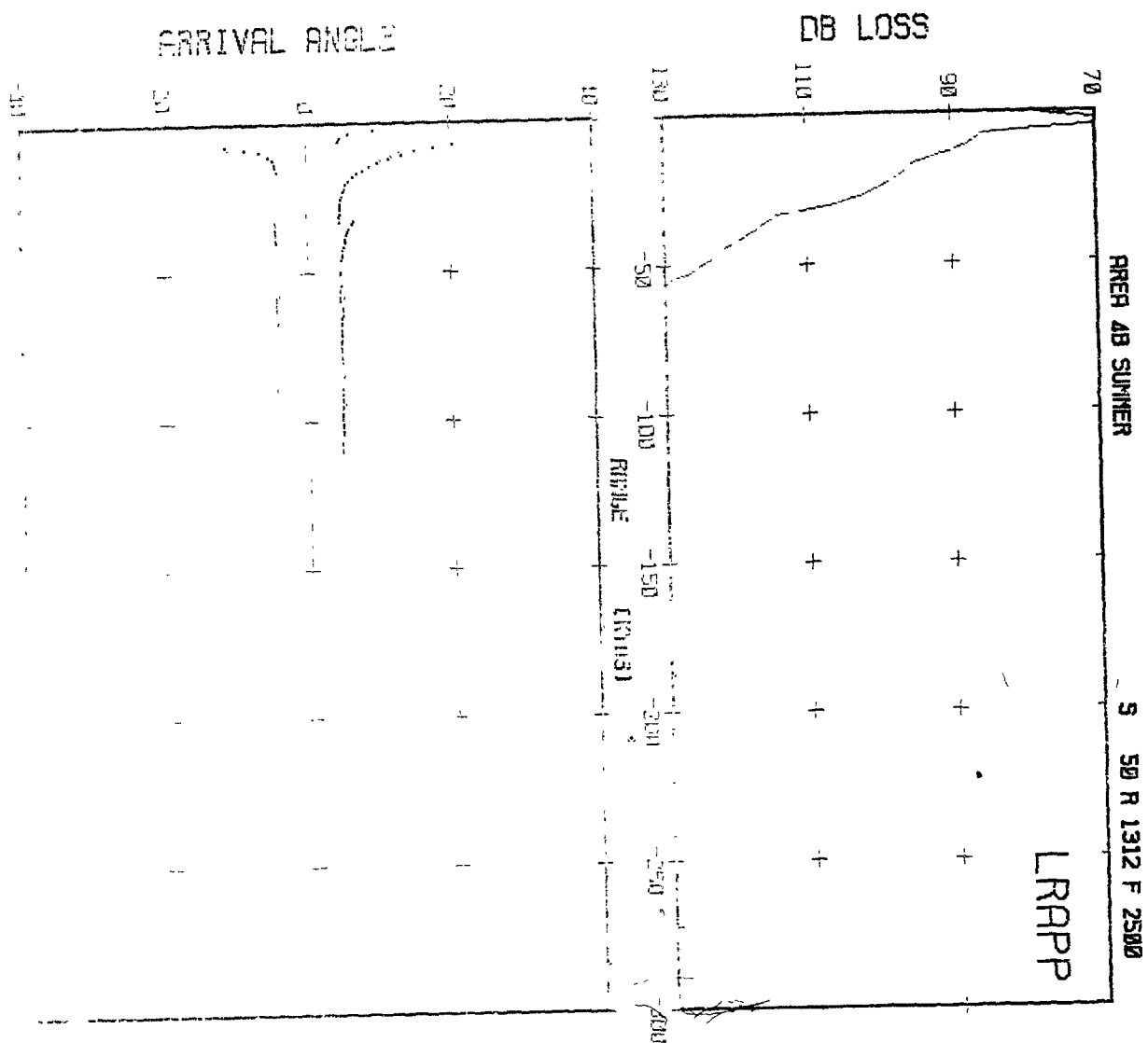
DEPTH IN METERS



NOISE (DB)





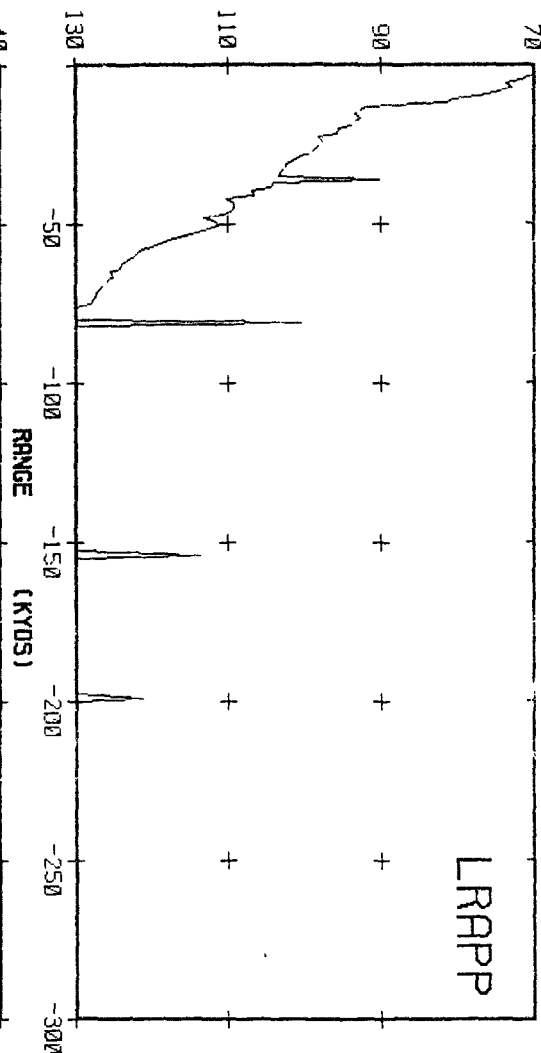


AREA 48 SUMMER

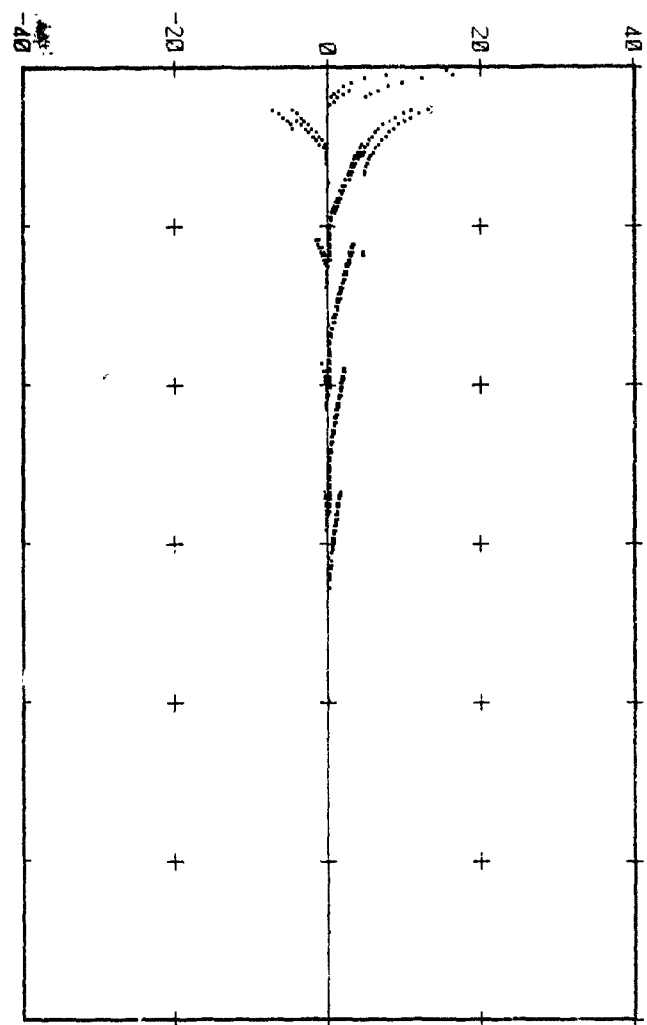
S 266 R 1312 F 2500

1450 M/S, 1500 1550

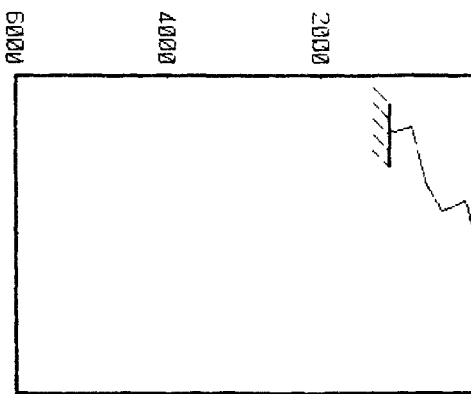
DB LOSS



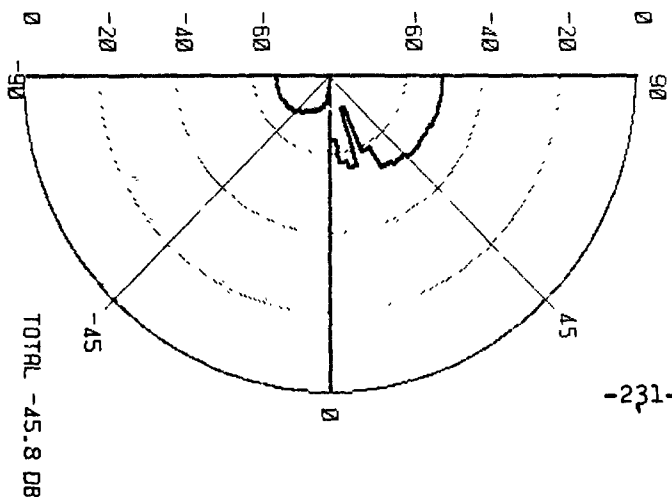
ARRIVAL ANGLE

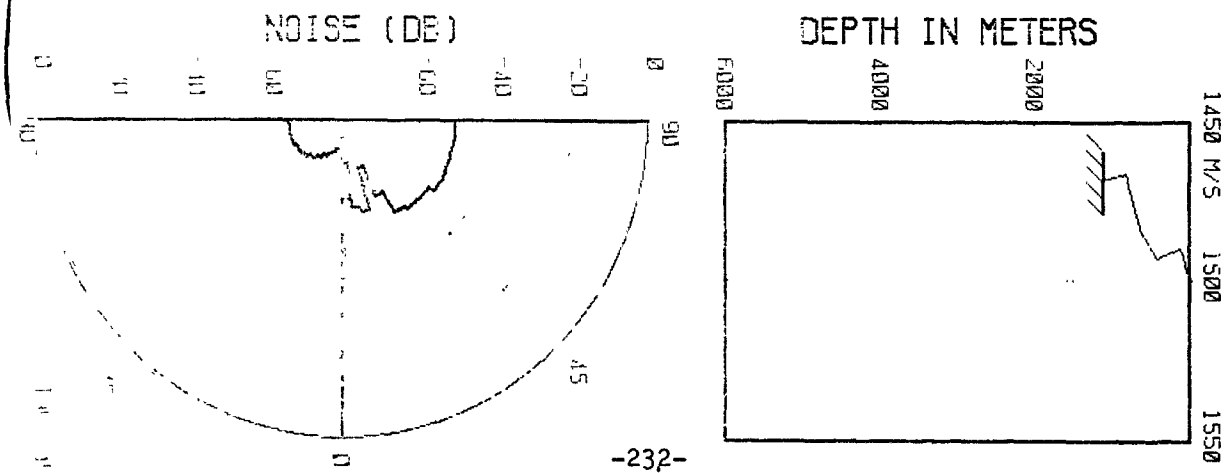
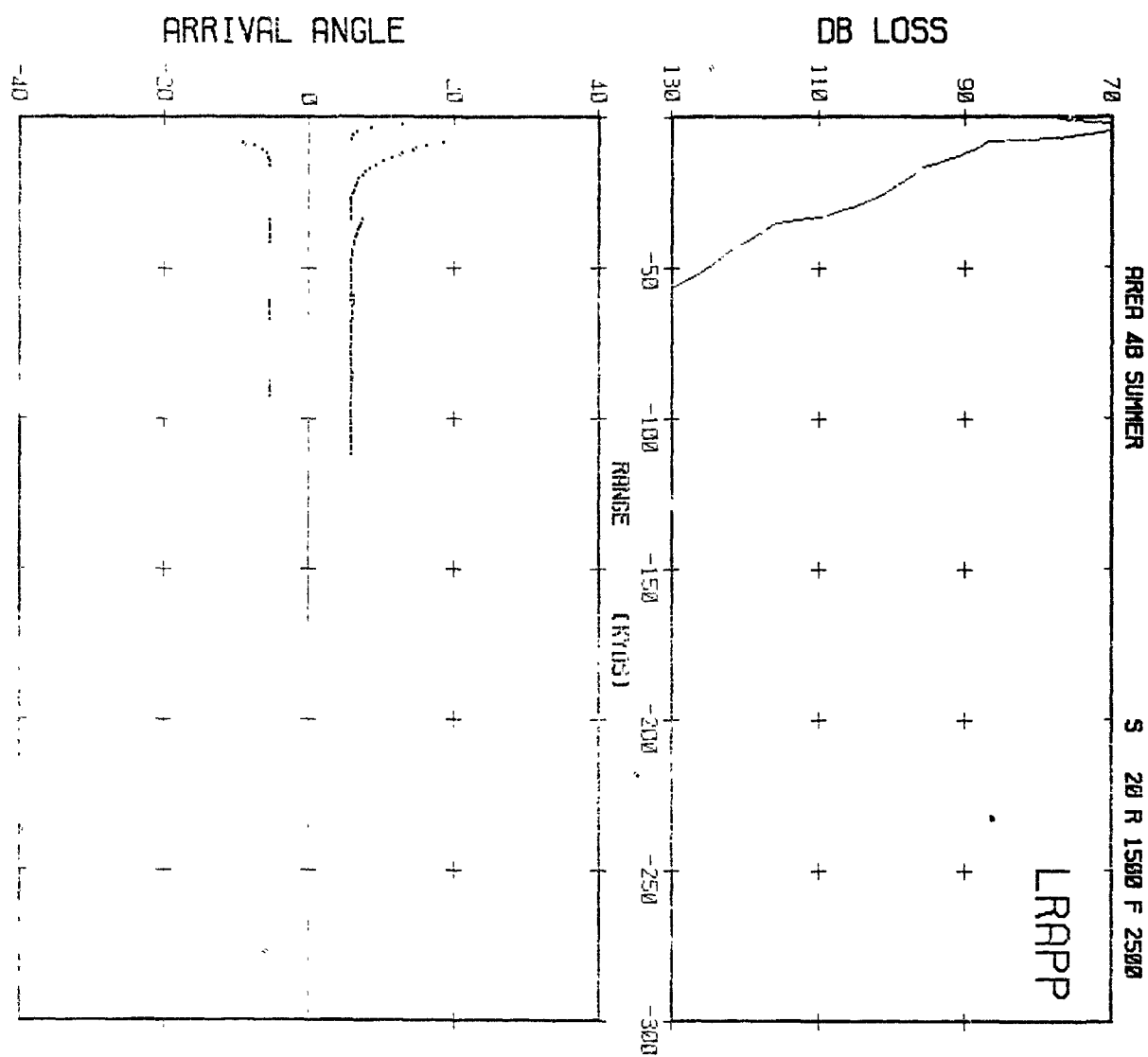


DEPTH IN METERS



NOISE (DB)



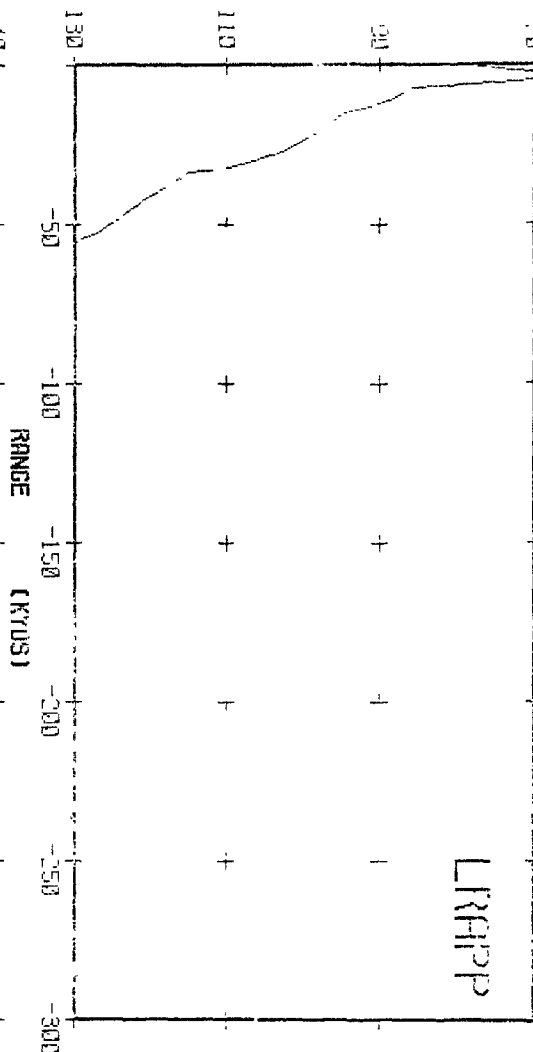


AREA 4B SUMMER

S 50 R 1500 F 2500

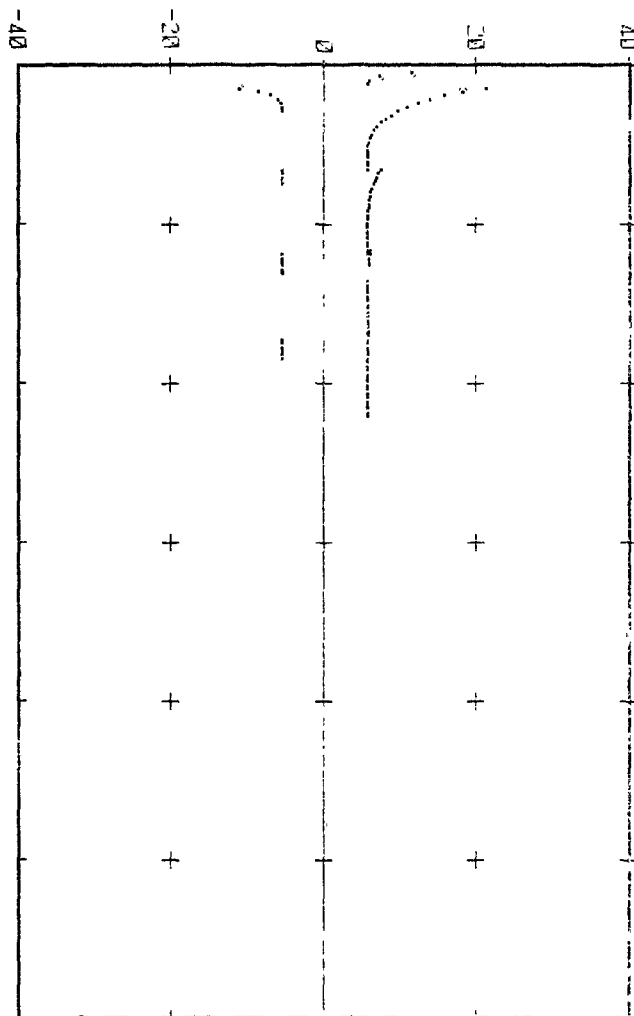
1450 M S 1500 1550

DB LOSS

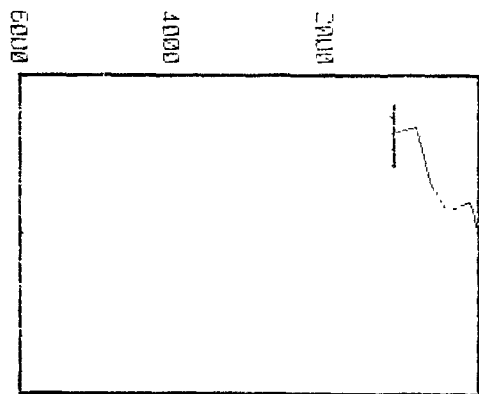


LRRPP

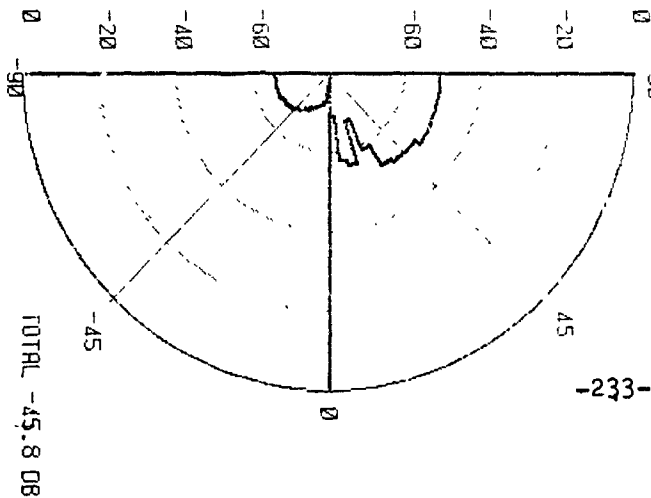
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



-233-

PRER AB SUMMER

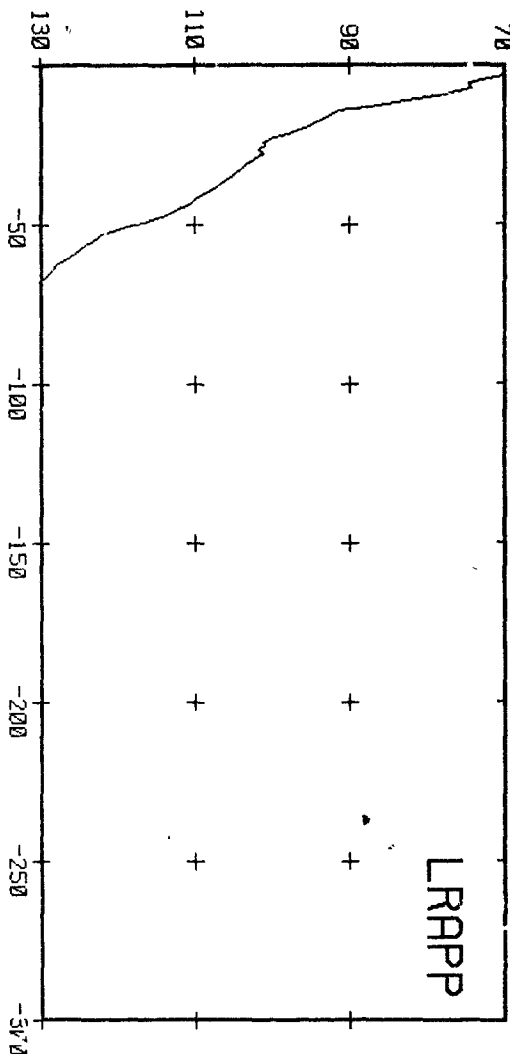
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1450 M/S

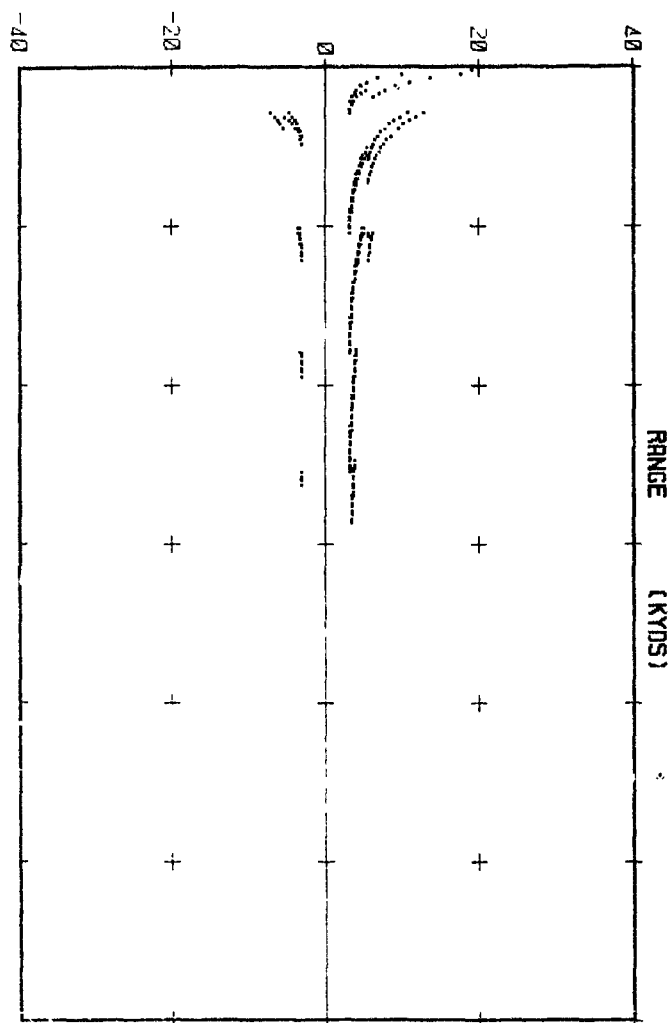
1500

1550

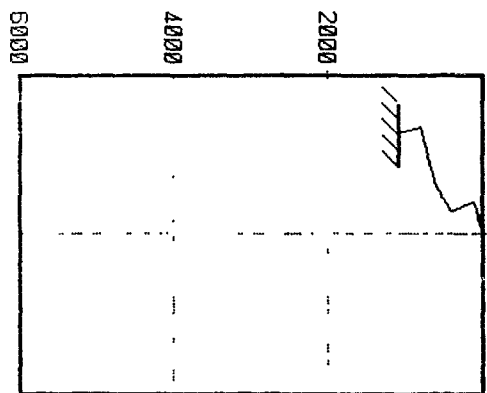
DB LOSS



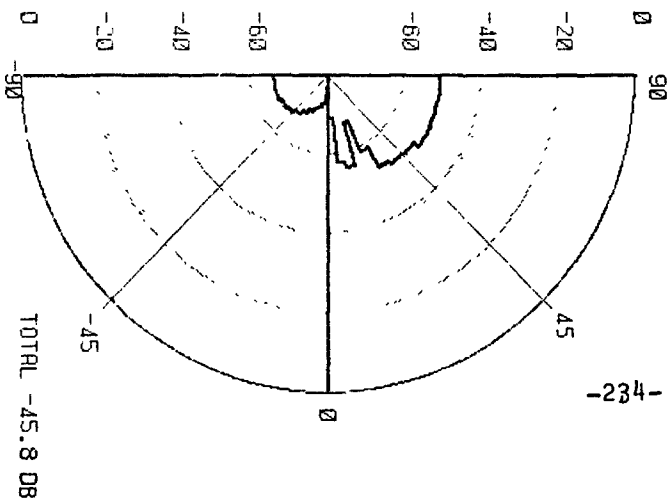
ARRIVAL ANGLE

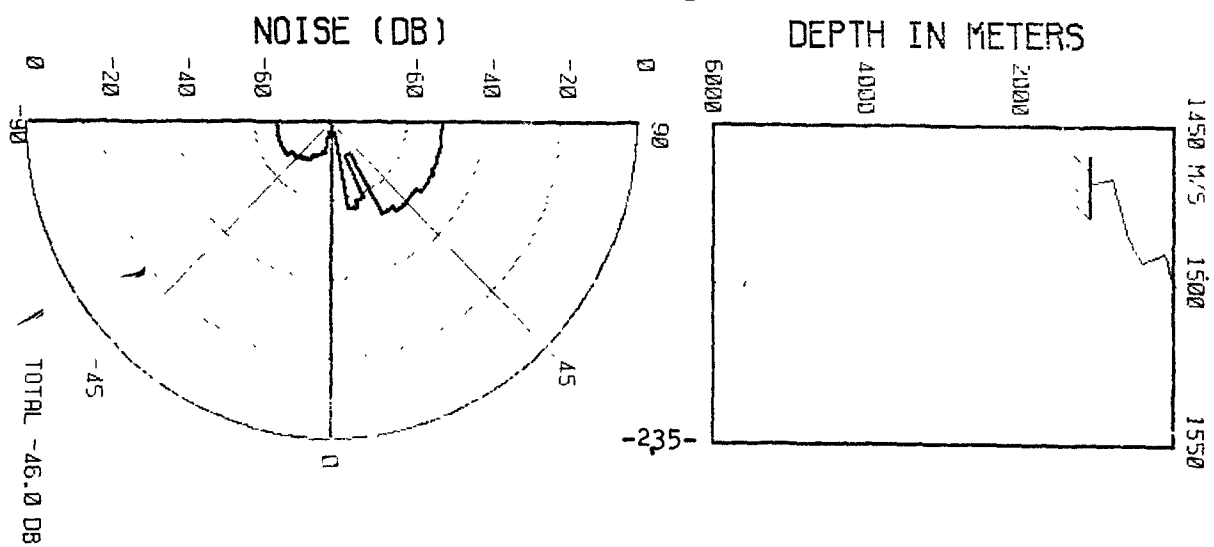
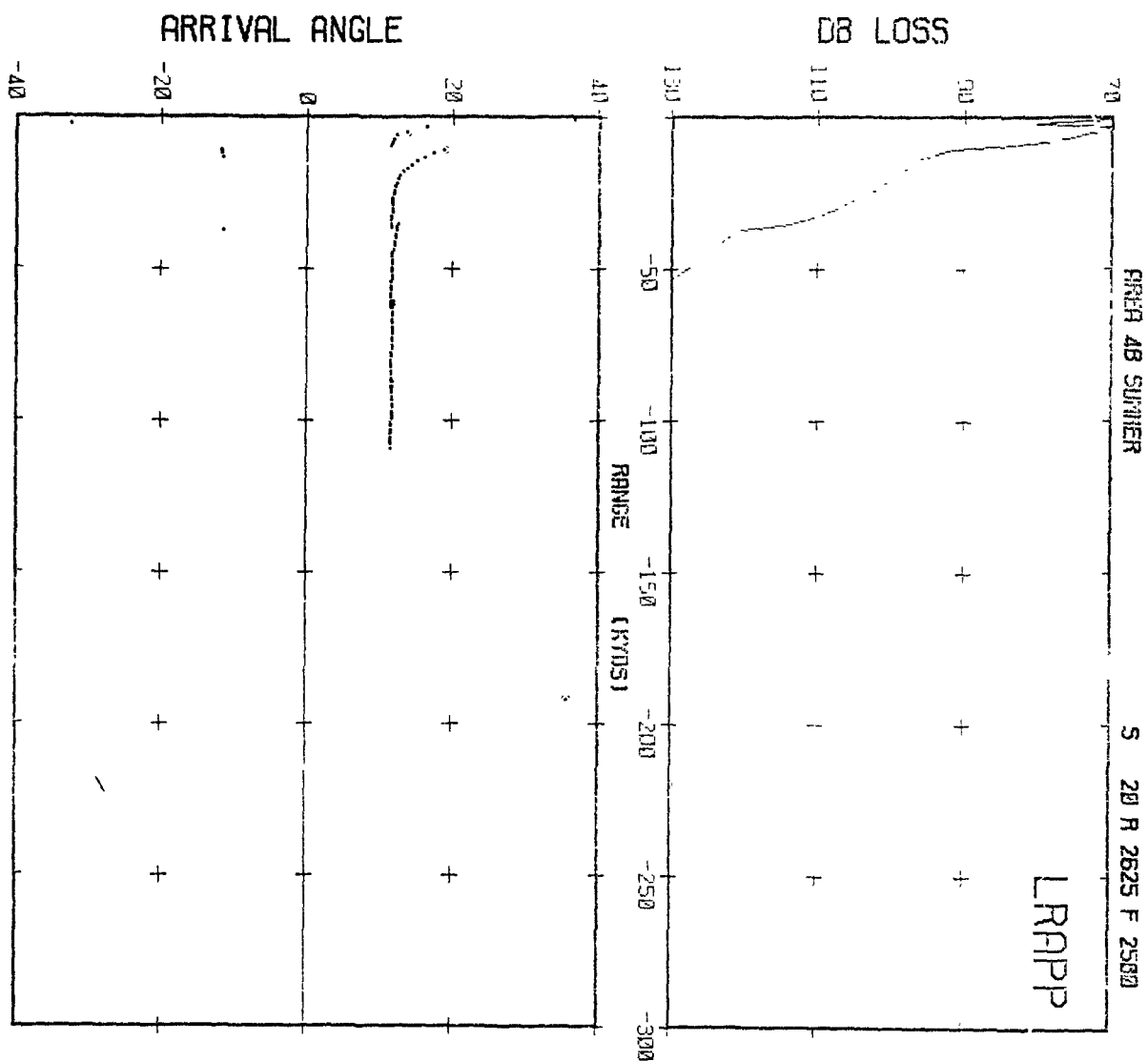


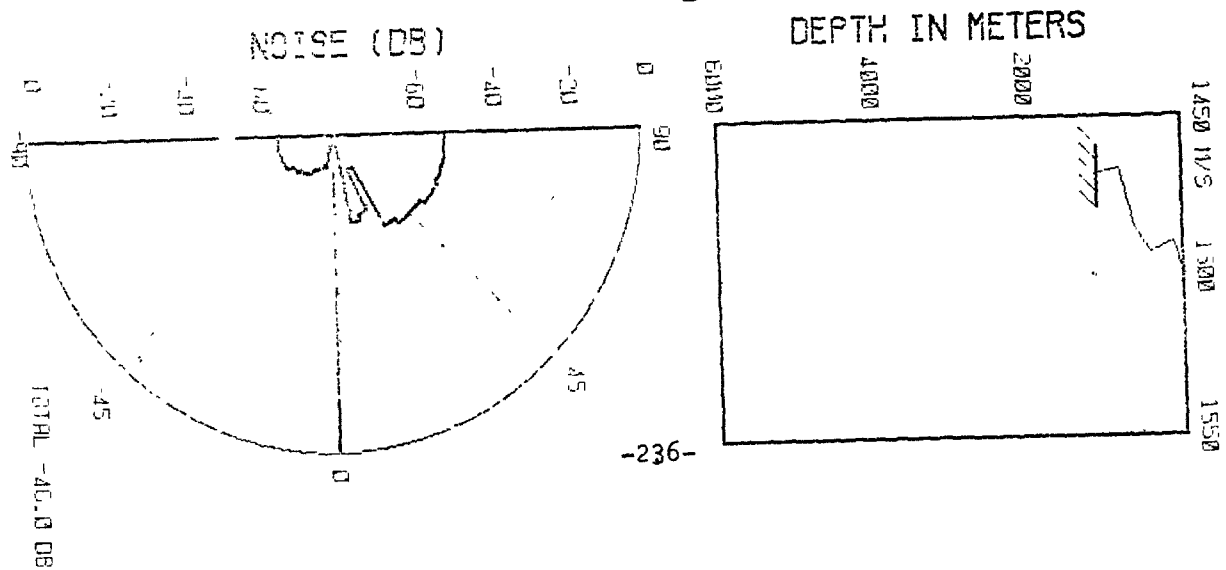
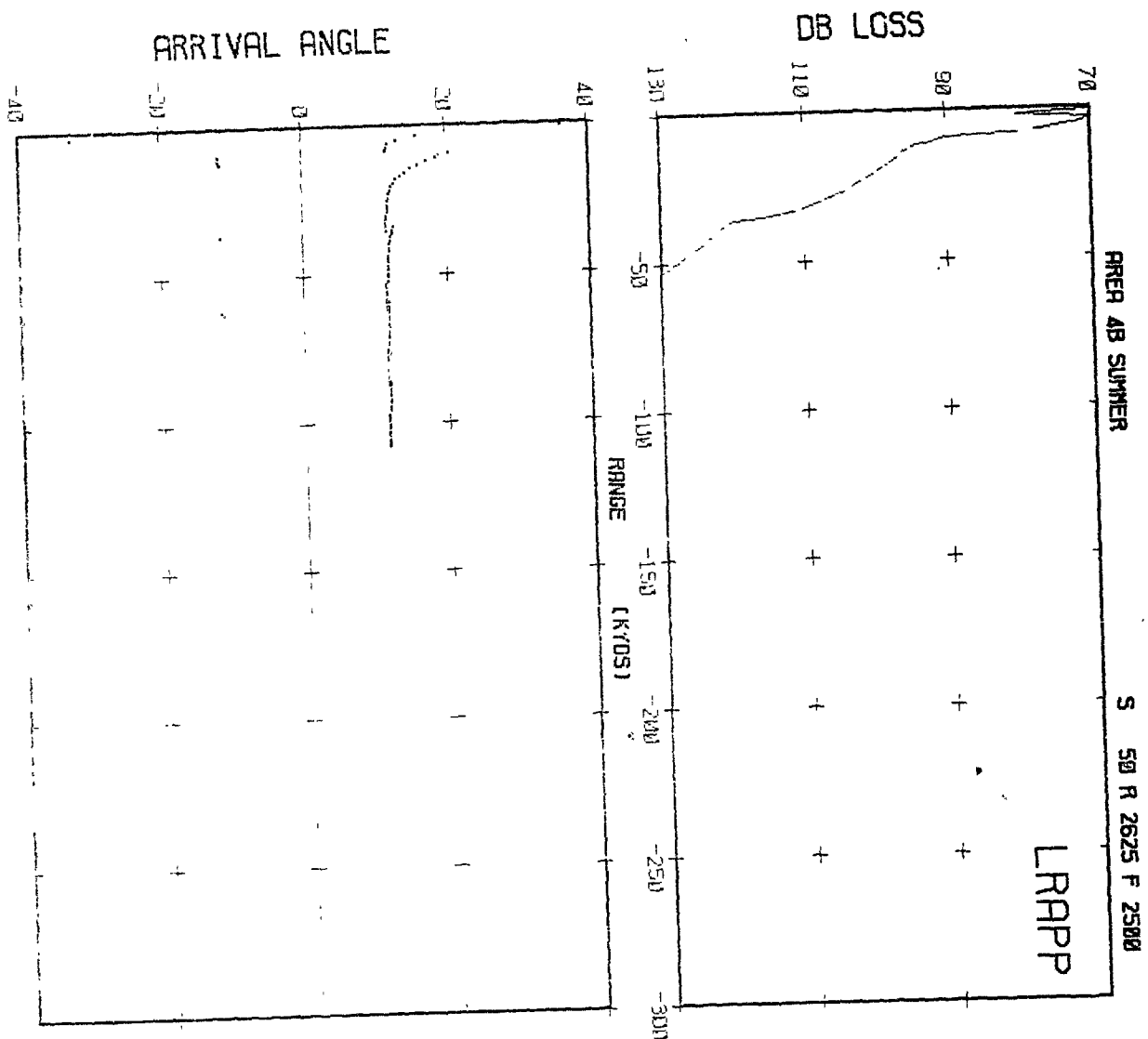
DEPTH IN METERS

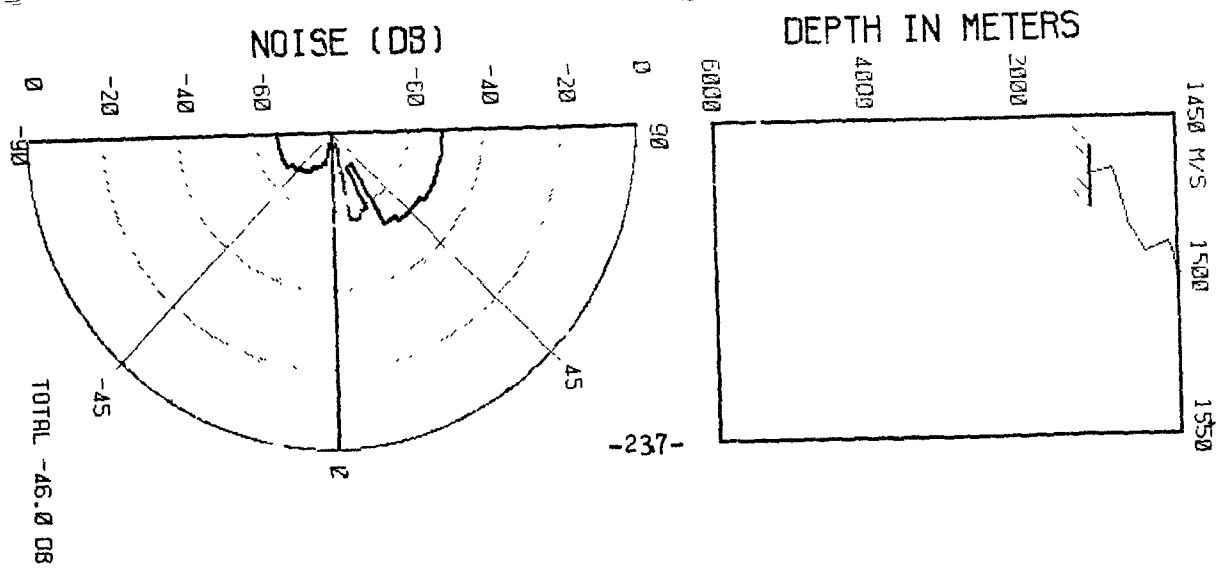
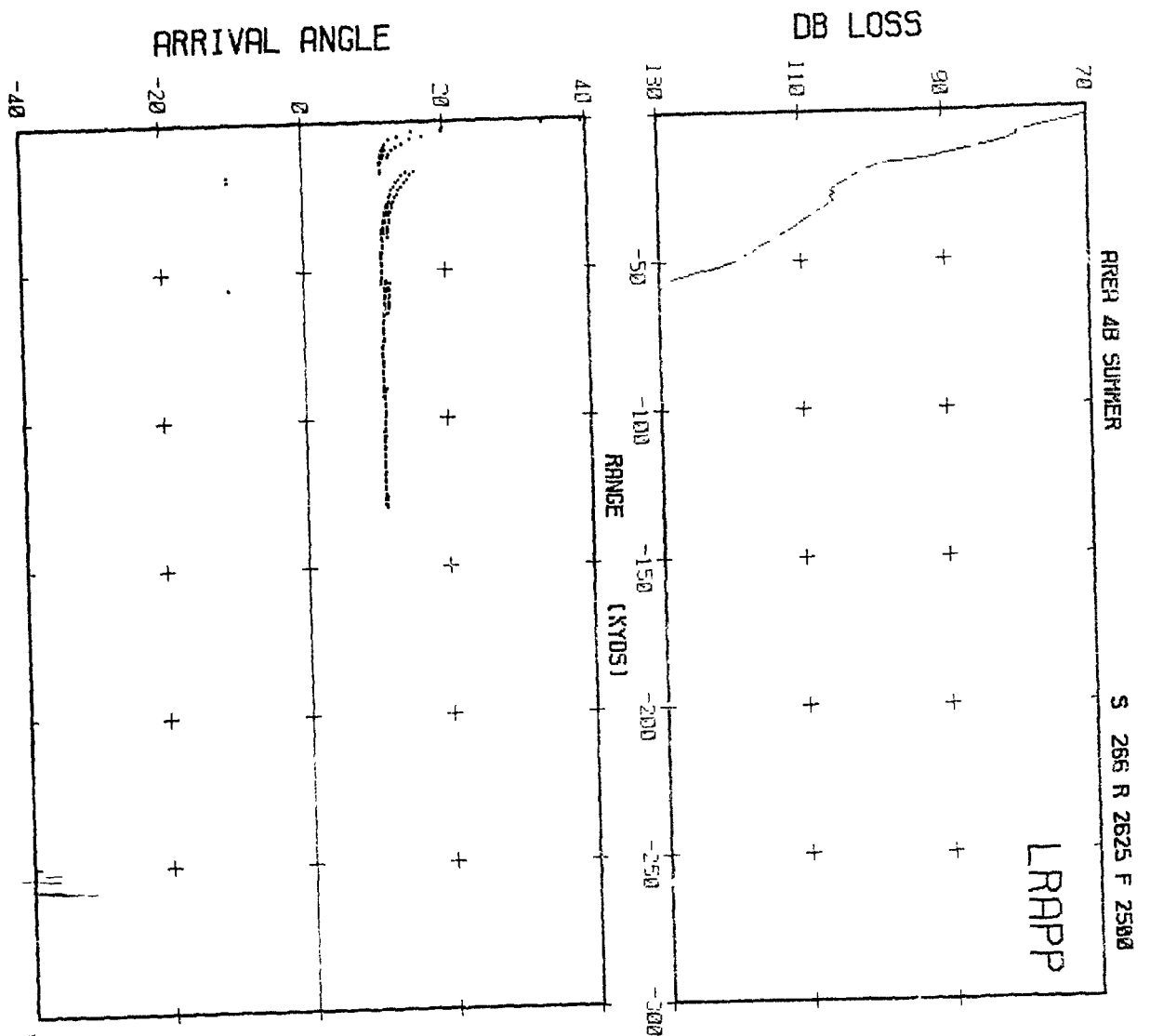


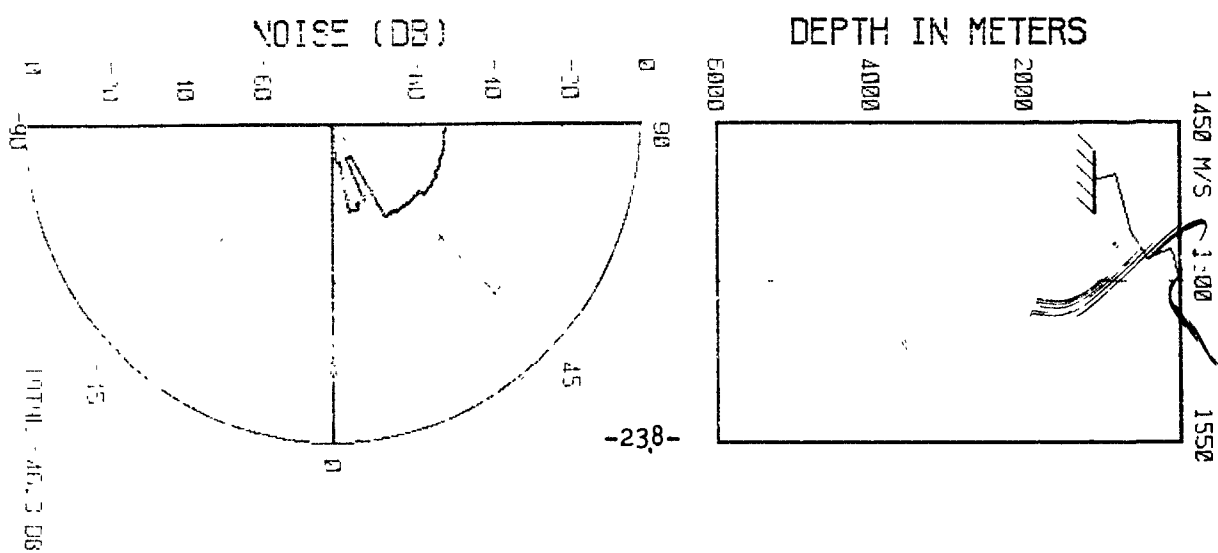
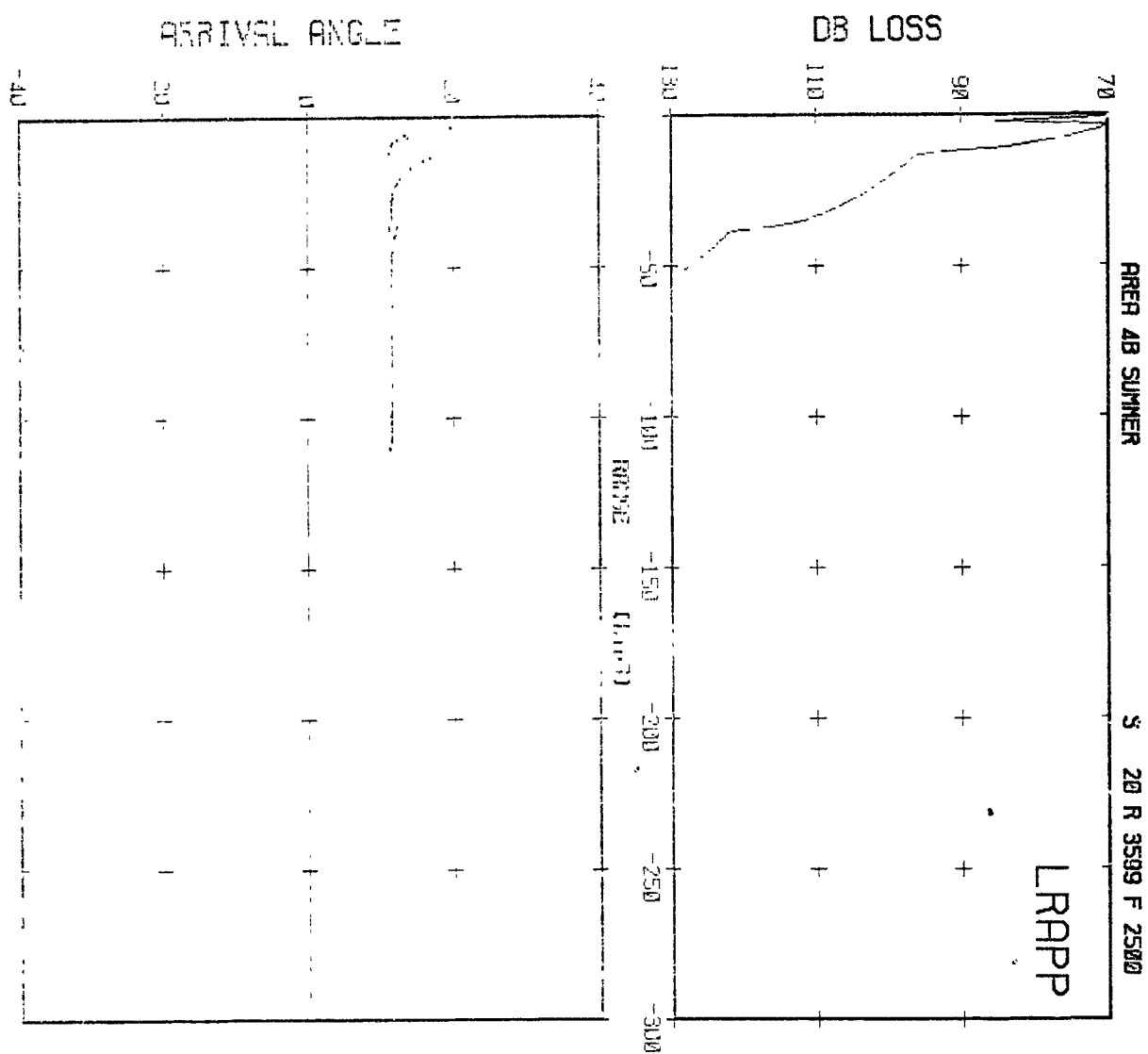
NOISE (DB)

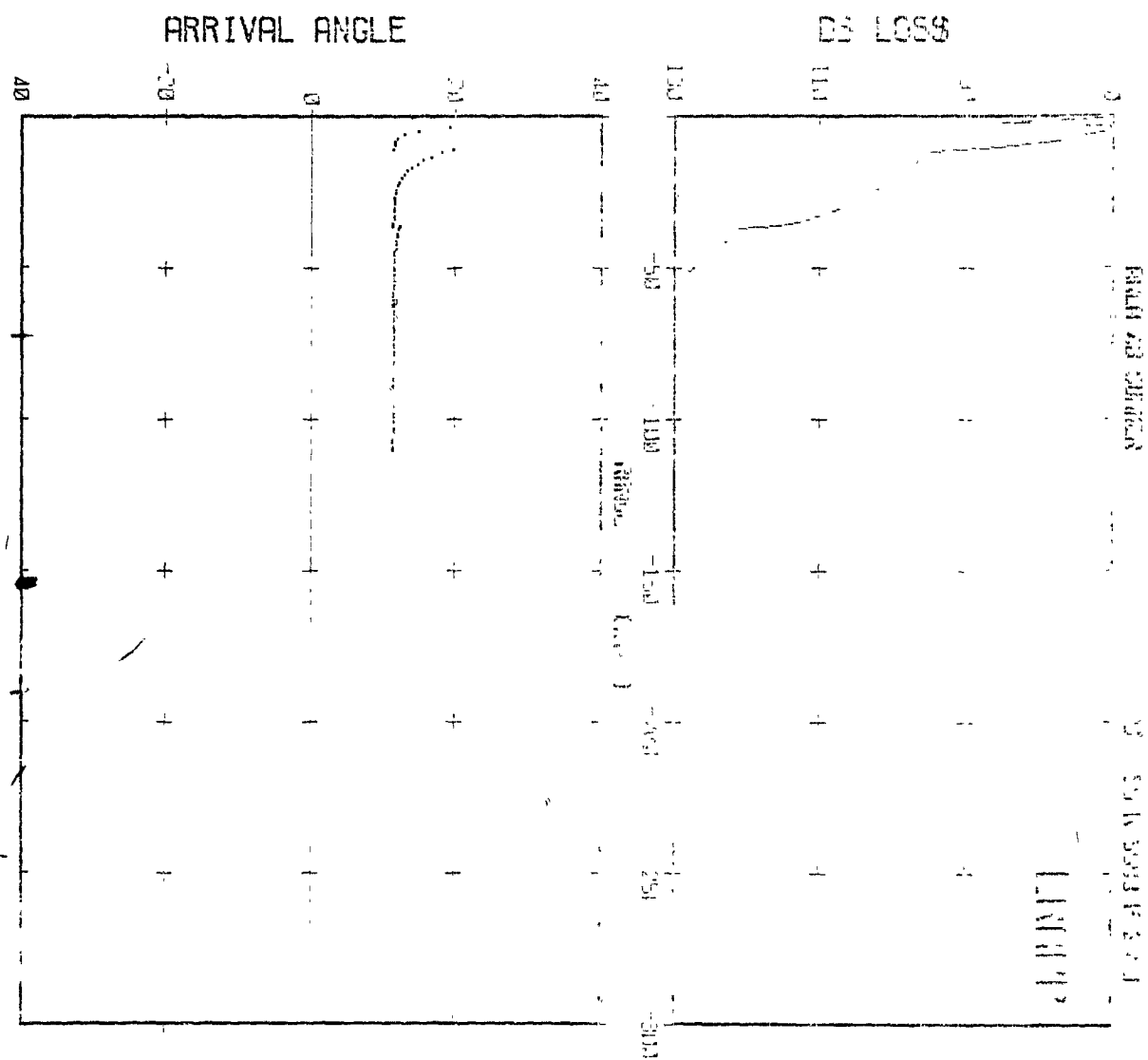










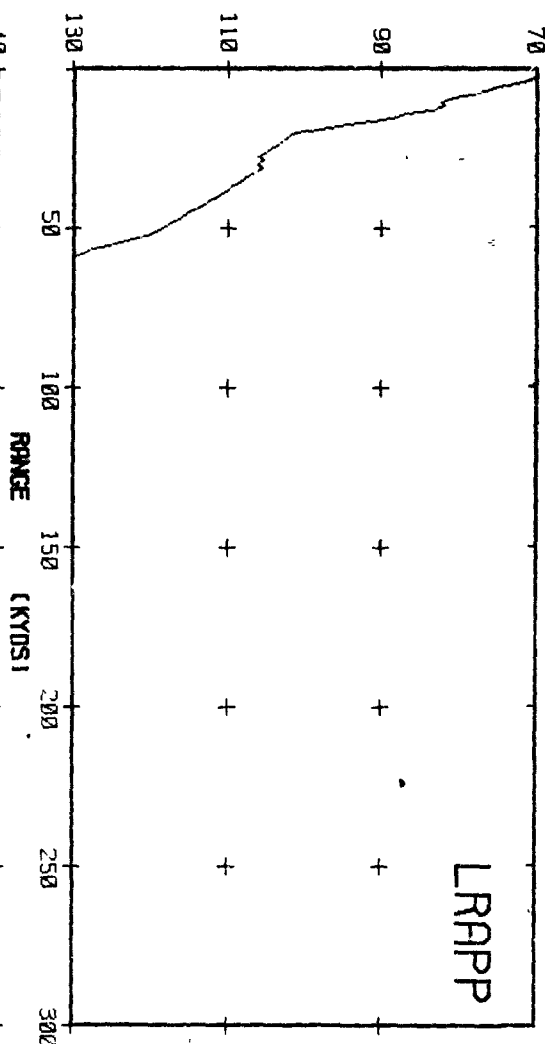


RRR AB SUMER

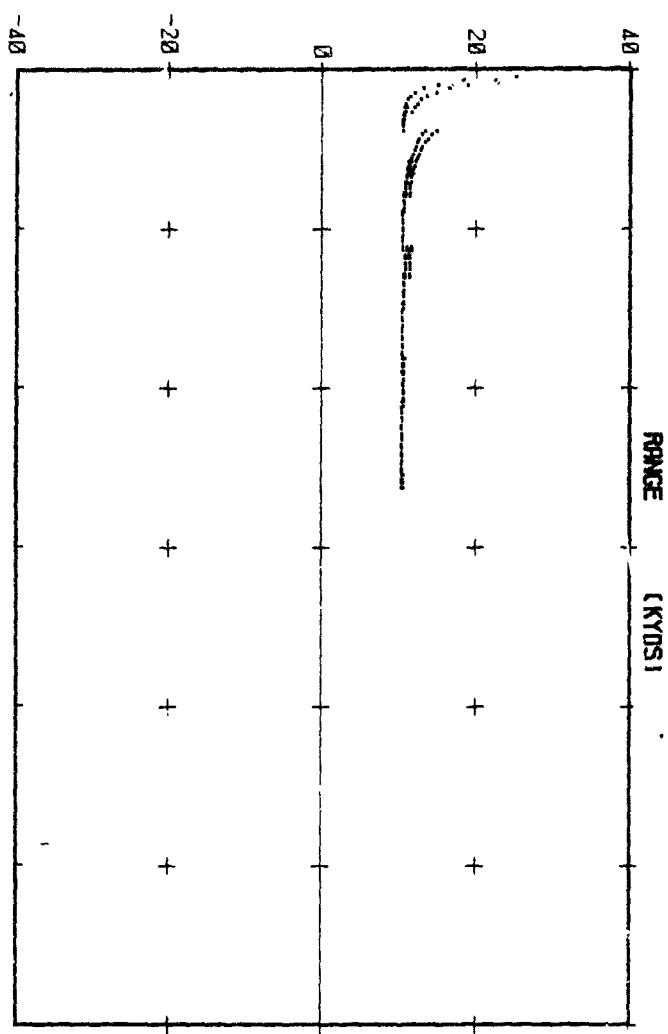
S 266 R 3599 F 2500

LRAPP

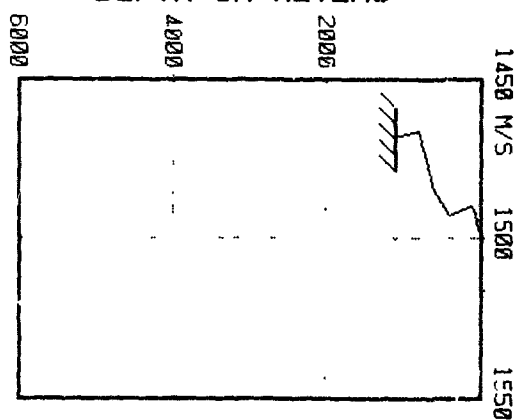
DB LOSS



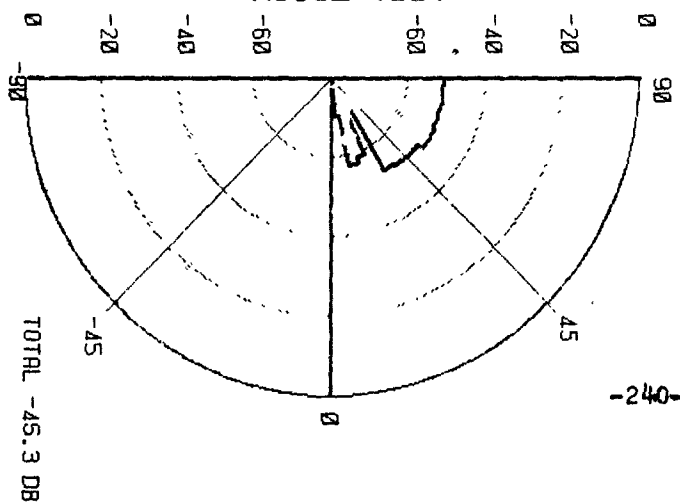
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



TOTAL -45.3 DB



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SUITE 1425
ARLINGTON VA 22203-1995

IN REPLY REFER TO:

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Report Number	Personal Author	Title	Publication Source (Originator)	Pub. Date	Current Availability	Class.
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME VII. AREA 3A SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0910342	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME VIII. AREA 3B WINTER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0910343	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME IX. AREA 3B SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0910344	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME V. AREA 2 SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0911224	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME XI. AREA 4A SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0912560	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME X. AREA 4A WINTER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0916556	U
MC-011 VOL. 14	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME XIV. AREA 5 WINTER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0916557; ND	U
MC-011 VOL. 13	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME XIII. AREA 4B SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0916610; ND	U
MCR008	Goodman, R. R., et al.	THE NEAT 1 EXPERIMENT (U)	Maury Center for Ocean Science	721001	NS; ND	U
Unavailable	Cherry, W. R.	LRAPP BEAMFORMER	Scripps Institution of Oceanography Marine Physical Laboratory	721015	ADA081876	U
ONR ACR-186	Gregory, J. B.	PROJECT LRAPP TEST BED- TECHNOLOGY USED IN THE DEVELOPMENT OF A DEEP-OCEAN STABLE PLATFORM (U)	Office of Naval Research	721024	AD 052-3370 AD0910344 ; ND	U
MC-010	Unavailable	CHURCH GABBRO EXERCISE PLAN- LRAPP (U)	Maury Center for Ocean Science	721026	ND	U
WHOI-72-87	Daubin, S. C., et al.	THE ACODAC SYSTEM	Woods Hole Oceanographic Institution	721101	AD0756628; ND	U
NRLR7516	Fleming, H. S., et al.	PROJECT NEAT 1 ENVIRONMENTAL DATA REPORT (U) (USNS J.W. GIBBS)	Naval Research Laboratory	721129	NS; ND AD 52-3374	U